Doctoral Dissertation

Investigating Park Visitor Perceptions through Social Network Data to develop Place Branding

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Abstract

Cities, regions, and even countries across the entire world develop strategies for the development of their competitive advantage against others. Place branding refers to the development of brands for geographical locations such as regions, cities or communities. The importance of places is what connects city branding to cultural geography. Characteristics of identity, differentiation, and personality can be managed to maximize equity and awareness. There is also a focus upon the ever-necessary consumer orientation.

Indonesian government within various tiers (local, provincial, and national) currently intensifies the partnership with private sectors to create place branding strategies. The uniqueness of local cultures, as well as the physical attributes of the place, can create unique advantages that are not easy to be replicated by competitors. Bandung has its own approach to build city's image. This city creates its image trough the development of public city parks. The provision of parks in the residential areas of the city of Bandung has experienced a radical paradigm shift: parks have become a key attraction at the city service scale and provide entertainment and recreation for urban communities through their new physical design and attractive facilities. One of the concepts used to promote parks to people is place branding. It is done by revitalizing public spaces into several thematic parks. This strategy has helped Bandung stand out from other cities and has improved the city's branding.

Therefore, assessments on the perceptions of parks' visitors are needed to determine if the parks are well-known to the wider community. The assessment can also be utilized to measure to what extent the influence of thematic parks for place branding of the city.

Globally, people are now connected by online social networks. They can share their experiences, stories, and opinion through this media. Social networks data by online reviews is used to identify whether a certain branding is successful or not by looking at the user's opinion.

The aims of this study are to investigate parks visitors' perceptions using social networks data to develop place branding and to evaluate if the existing parks correlates to other determinant factors in the place branding.

Study found that, social networks data shows great promise in assessing visitors' perceptions as there are large volumes of data available online which implicitly demonstrate user's attitudes and emotions using text. Thematic parks are effective for the place branding of a city. The large distinction in the number of reviewers between thematic parks and non-thematic parks can be interpreted that the thematic parks are more attractive than the other ones. Indeed, these reviews would also increase their popularity implicating on the increasing number of visitors. This is definitely in line with the main function of city parks as public spaces and community activity centers. Moreover, visitors' perception and the ratings of reviews show great promise for assessing urban parks with the thematic concept. Assessments provide an overview of the attractiveness of thematic parks and how they are known to

the wider community as a type of place branding for the city of Bandung. Potential of geo-tagging social network data based on sentiment analysis, as well as offering possible new directions for the research community for city planners. Sentiment analysis of social network data can offer city planners and developers better information that can be used to improve the planning and quality of the park.

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Chapter 1. Introduction

1.1 Background

A Brand serves several valuable functions. To begin with, a brand is defined as a name, term, sign, symbol, design, or a combination of these elements that is intended to identify the goods or services of a seller and differentiate them from competitors [1]. Branding can also be viewed as an effort to build the image of products or services according to expectation [2]. The image of the brand can be obtained when audiences have a good understanding about the object that is represented. Moreover, branding is an effective marketing strategy tool that has been used successfully over generations. Nowadays, branding is experiencing a new popularity resulted from the emergence of the innovative applications. Practically, branding has intervened all aspects of public and private life [3]. Cities, religion, and even countries across the world are developing strategies to improve their competitive advantages over other [4]. They intentionally use branding to promote their uniqueness among growing competition for capitals, visitors, residents, and corporations. In fact, in the case of geographic locations (i.e., places), many efforts and resources are being devoted to the development of place marketing and place branding strategies. Branding position are not only used by global cities, capital, and tourist destinations, but also by smaller growing cities and even city parks. Therefore, branding is done by providing adequate information and experience to the public about the object of branding [5].

Furthermore, globalization has increased global shifts of resources, capital and people, and has intensified the competition among cities for attention, influence, markets, investments, businesses, visitors, talents and significant events [6]. Place branding refers to the development of brands for geographical locations such as regions, cities or communities. This action usually aims to trigger positive associations and to distinguish a certain place to others. Up to this point, place branding is an essential element of place marketing that involves influencing people's ideas by forging particular emotional and psychological associations with a place [7]. It then becomes a marketing tool for place management. The term "place branding" has been mixed and matched indiscriminately with other terms, such as place marketing, urban marketing, and place promotion [15].

According to Resonance consultancy, has undertaken destination assessments and developments strategies for a wide range of communities, cities and countries [23]. Research conducted how visitors and citizens themselves influence the identity and perceptions of cities. Proprietary Resonance research evaluates each quality city across the six pillars of place equity: place, product, programming, people, prosperity and promotion. To measure the relative attractiveness of a city's place branding, resonance identifies the number of very good and excellent local land traveler recommended neighborhoods, landmarks, parks, and outdoor activities on TripAdvisor for each destination. Table 1 shows the top 15 city brands for place and promotion.

Table 1.1 Top 15 World's Best City Brands for Place and Promotion

Place		Rank	Promotion	
City	Country		City	Country
Lisbon	Portugal	1	London	United Kingdom
Singapore	Singapore	2	New York	USA
Sydney	Australia	3	Paris	France
Barcelona	Spain	4	Melbourne	Australia
Madrid	Spain	5	Berlin	Germany
Rome	Italy	6	Singapore	Singapore
Tokyo	Japan	7	Amsterdam	Netherlands
Hong Kong	China	8	Hong Kong	China
San Diego	USA	9	Madrid	Spain
London	United Kingdom	10	Tokyo	Japan
Bangkok	Thailand	11	Sydney	Australia
New York	USA	12	Washington	USA
Paris	France	13	Dublin	Ireland
Melbourne	Australia	14	San Francisco	USA
Brisbane	Australia	15	Toronto	Canada

Source: Resonance Consultancy, New York, 2017

Some of factors place ranking are number of very good and excellent neighborhoods and landmarks recommended by locals and visitors, and number of very good and excellent parks and outdoor activities by locals and visitors. Factors of promotion ranking are number of Google references for each city and number of TripAdvisor reviews for each city.

Indonesian government within various tiers (local, provincial, and national) currently intensifies the partnership with private sectors to create place branding strategies. This involves the evaluation, (re)assembling, (re)positioning and (re)formulation of the identity of the place, its product offering, and its communication strategies. The first step in this process is the identification of sustainable competitive advantages. One of these competitive advantages could be one of the elements of the place identity, particularly when visitors are from diverse cultural backgrounds [8]. The uniqueness of local cultures, as well as the physical attributes of the place, can create unique advantages that are not easy to be replicated by competitors [9]. Some cities in Indonesia apply city branding to attract tourists. For example, Jakarta create a slogan or branding "Enjoy Jakarta" to generate city's image. The aim is to attract people to come to Jakarta and spend their money by doing this, the government of Jakarta creates city branding to boost their economic activities by offering various amenities. Another example can be taken from Surakarta or well-known as Solo. This city takes "Solo is the island of Java" to

define its identity. Solo creates its image as the core of Javanese culture in order to make distinction with other cities in Java Island. Meanwhile, Yogyakarta promotes "Special Jogja" to give a positive impression to visitors and send a strong message to tourists to have special experiences by visiting Yogyakarta.

Different with cities discussed above, Bandung has its own approach to build city's image. This city creates its image trough the development of public city parks. The provision of parks in the residential areas of the city of Bandung has experienced a radical paradigm shift: parks have become a key attraction at the city service scale and provide entertainment and recreation for urban communities through their new physical design and attractive facilities [10-12]. One of the concepts used to promote parks to people is place branding. It is done by revitalizing public spaces into several thematic parks. This strategy has helped Bandung stand out from other cities and has improved the city's branding. Thematic parks are the parks with a variety of interesting themes and an artistic atmosphere that is prepared as a creative space [13]. Since human creative activities are varied, creative spaces can be used to link many different activities with urban spaces [14, 15].

In Indonesia, the existence of public open space has being the focus of government's attention, not just the quantity, but the quality of public open space were also considered related to its major influence to the various aspects of people's life. Based on Indonesian Law Number 26 of 2007 concerning spatial planning article 29, it is stated that the proportion of green open space is minimal in urban areas, which is 30% of the total area [16].

Table 1.2 Classification and Proportion of the Area of Green Open Space in the City of Bandung

Green Open Space	Proportion to the area of the city of Bandung	
	Area (ha)	%
City park and seedling garden	216.41	1.29
Cemetery	148.24	0.89
Areas along high voltage electricity lines	10.17	0.06
Riverbanks	23.26	0.14
Pedestrians space	176.91	1.06
Areas along railway lines	6.42	0.04
Conserved forest	4.12	0.02
Critical land	416.92	2.49
Government owned facilities	78.13	0.47
Others	958.47	5.73
Total	2041.52	12.20

Source: Bandung City Funeral and Landscaping Service, 2018

The proportion is divided into Public open space with a total area of approximately 3,400 (three thousand four hundred) hectares or 20% (twenty percent), and private open space with a total area of approximately 1,700 (one thousand seven hundred) hectares or 10% (ten percent). This composition aims to create an ecological balance of urban areas that can be realized if green open space based on quality can be maintained and its balance is maintained. Physically, the form of open green space can be differentiated into natural open space in the form of natural wild habitat, protected areas and national parks, as well as non-natural green open space or assisted areas such as parks, sports fields, and flower gardens. In terms of the function of green open space, it can also function ecologically, socially/culturally, architecturally, and economically. Ecologically open space can improve groundwater quality, prevent flooding, reduce air pollution, and reduce city temperatures. In its development, this urban green open space consists of several types, one of which is City Park. And one part of the City Park is the Thematic Park. Table 1.1 city park development is getting a very high spotlight, this can be seen from the vast number of city parks which amounted to 216.41 ha.
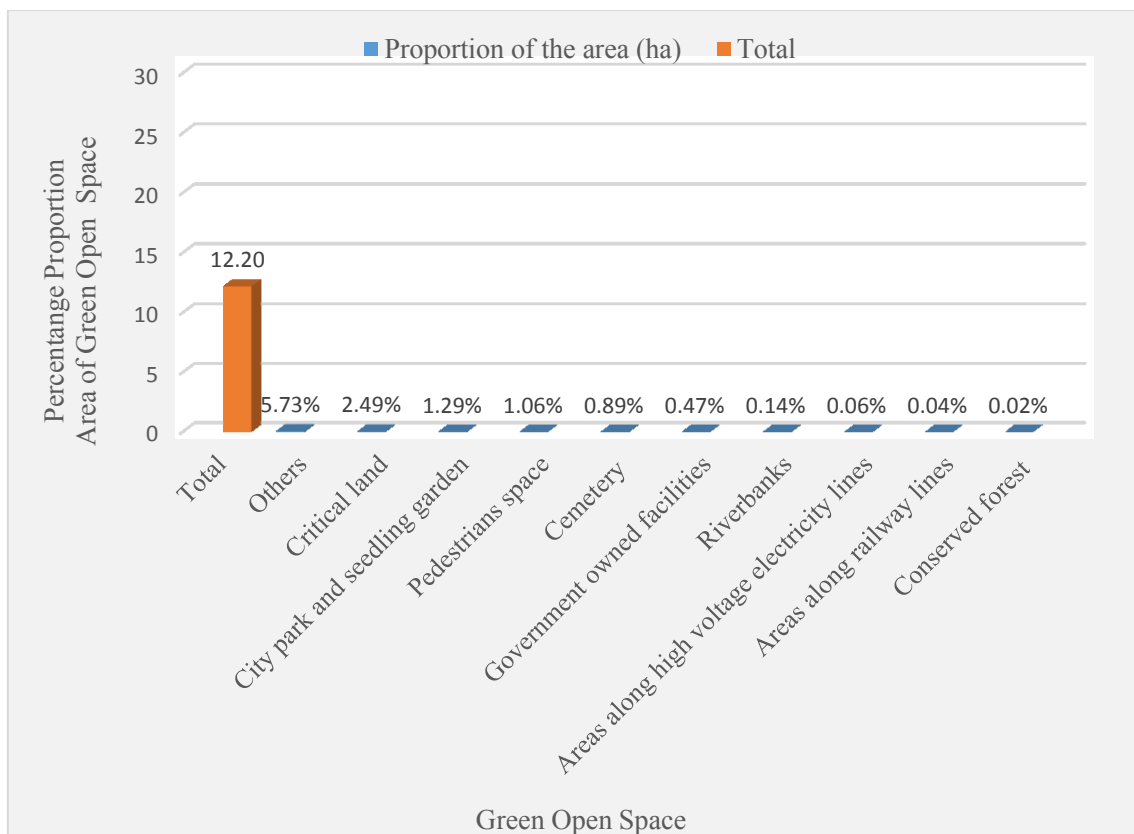
Figure 1.1 Proportion of Green Open Space to the Total Area of the City of Bandung

Figure 1.1 shows that the availability of green open space in the city of Bandung has only 12.20 %, whereas ideally a city must have a green open space of 30 % of the total area. The study of the concept of development and management of green open space, especially thematic parks in the city of Bandung,

explained that the condition of open green space is still far from the target. In addition, green open space also does not meet the applicable standards, due to the limited city government budget for maintenance, awareness of the poor to maintain open green spaces including existing thematic parks, the large number of green open space land allocations, the number of changes in green open space functions to sell, facilities. In an effort to fulfill the functions of the thematic park, the provision of park facilities must pay attention to the standards set out in Minister of Public Works Regulation No. 5 of 2008, where all city parks must meet a minimum standard of 0.3 m^2 per city resident, with a garden area of at least 144,000 m^2. This park is shaped as a green open space, which is equipped with recreational and sports facilities, and a sports complex with a minimum of 80% -90% green open space. All these facilities are open to the public. As an effort to improve the quality of public open space and attract people to visit, the government of Bandung offers thematic concept that applied to the physical elements of public open space in the city of Bandung. The development of thematic parks in the city of Bandung must fulfill several basic functions of thematic parks, namely: ecological, social-cultural, aesthetic and economic functions.

1.2 Problem Statement

A brand is a good name of a product, an organization or a place and is ideally linked to its identity. Based on previous studies, place attractions have two basic forms namely an emotional bond and a dependence-identity relationship of the place [17]. Place attachment as an emotional bond refers to the relationship that individuals develop with particular places through repetitively positive interactions [18]. Place attachment arise when a setting-such as a local park-is filled with meanings that create or enhance visitor's emotional ties to it [19]. Place branding might just hold one of the keys to build networks needed for consistent imaging of place across sectors and pressure groups and to create a strong identity in a versatile online environment, [20]. Therefore, assessments on the perceptions of parks' visitors are needed to determine if the parks are well-known to the wider community. The assessment can also be utilized to measure to what extent the influence of thematic parks for place branding of the city.

1.3 Research Purpose

Globally, people are now connected by online social networks. They can share their experiences, stories, and opinion through this media. Consequently, it can influence other people's perceptions [21]. One way to get information about people's perceptions and opinion related to a certain place is through online reviews [22]. Furthermore, online reviews are essential for businesses. They usually encourage customers to review their products and services to increase their popularity and to achieve feedbacks from customers. In the end, they use these reviews to influence the purchasing decision of the potential new customers. Online review in particular is powerful to reach large audiences. It is also strongly

influential and less costly compared to conventional marketing methods [23]. Social networks data by online reviews is used to identify whether a certain branding is successful or not by looking at the user's opinion. The aims of this study are to investigate park visitors' perceptions using social network data to develop place branding and to evaluate if the existing parks correlates to other determinant factors in the place branding.

1.4 Research Structure

This dissertation consists of 9 chapters. Each chapter represents each stage of the research. Some part of this research have been already published in scientific journals and proceeding. The structure of this dissertation is following this sequence:

Chapter 1	This chapter elaborates the introduction of the research. This chapter consists of background, problem statement, research purpose, and research structure.
Chapter 2	This chapter provides information gathered from the literature review which elaborates the city branding and place branding, the strategies of the place branding for public parks, visitors perceptions, and online reviews of social network.
Chapter 3	This chapter describe the study area, the concept of thematic parks as place branding strategies, park visitor's perceptions data collection from online reviews, and analysis text mining method of reviewer's perceptions.
Chapter 4	This chapter elaborates the process of text analysis from the social network provides excellent source data and will provide insight that can determine brand reputation**.**
Chapter 5	This chapter analyze the effectiveness of the place branding strategies by information visitors perceptions based Google Maps user reviews data and determine the perceptions of the community about thematic parks through rating reviews.
Chapter 6	This chapter assesses visitor's perceptions from the Google Maps user's reviews using text analysis.
Chapter 7	This chapter discusses the result of field survey to confirm findings attained from online reviews.
Chapter 8	This chapter discusses of social network data towards developing urban park attractiveness.
Chapter 9	This chapter summarize whole discussion into several conclusions and recommendation enabling further improvement for relevant parties.

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Chapter 2. Literature Review

2.1 City Branding

According to the American Marketing Association (AMA), a brand is a "name, term, sign, symbol, or design, or a combination of them, intended to identify the goods and services of one seller or group of sellers and to differentiate them from those of competition." Technically speaking, then, whenever a marketer creates a new name, logo, or symbol for a new product, he or she has created a brand. A brand is defined as the attributes that are linked to the name and logo associated with the personality of goods and that favor a unique positioning [1]. This concept applies to both products and services and especially to territories (countries, regions, and cities) [2]. Branding has been around for centuries as a means to distinguish the goods of one producer from those of another [3]. City Branding is the process or attempting a brand of a city to facilitate the owner of the city in the city to introduce the target market (investors, tourist, talent, event) the city by using the phrase positioning, slogan, icon, exhibitions, and various other media. City branding is a way of positioning the city in the global competition in response to the dynamics of economic, political, and social [4]. The beginning lies in the realization that all encounters with the city take place through perceptions and images. Thus, the concept of growing on city branding, especially coming from the emergence of corporate branding. Brand trust includes all the attributes and the physical and socio-psychology the goal is to influence the picture and perception. Set the image is related to the interaction between cities "external" and "internal". All that is in the city of communicating his image [5].

City branding has burgeoned as a research interest. The body of knowledge is both conceptual and empirical, and also at the practice level, many city administrators seek answers on how cities as brands could be designed and managed [6]. City branding has been defined as the 'purposeful symbolic embodiment of all information connected to a city in order to create associations around it' [7]. It can be used as a strategic tool to provide cities with a source of economic, political and cultural value. It can also be seen as an instrument to communicate the city's competitive advantage, the quality of the place, its history, lifestyle and culture [8]. Studies on city branding extend across academicians and practitioners in the last three decades, and it is a very promising new avenue to explore [9]. One foremost reason is that cities all over the world engage in marketing and branding efforts in order to stay competitive and relevant on the global market [10]. According to Ref [11], there are three types of place branding: 1) the name of geographic location as a brand name, 2) co-branding of place and product and 3) branding of a place per se. In relation to this typology, it is necessary to mention the two city branding strategies that have gained exceptional popularity recently, the "creative city" and the "experience city" strategies. These strategies involve the second and the third types of place branding and will be discussed further on. The goals of city branding are to foster economic

development of the city and to improve well-being of its residents. The driving force of economic progress in the current economic paradigm is human capital, namely educated, skillful and productive people. In other words, there is a strong correlation between regional economic growth and high concentration of qualified workers in the area.

The city of identity is a complex mix of urban spatial structure and its socio-cultural values. City branding needs to synthesize various characteristics and be replaced by a unique and irreplaceable identity. Place identity is built through history, politics, religion, and culture; through local knowledge, and bound by power struggles. National, cultural, natural, social and religious assets are important identifiers (mm). The category of place identity as a structural element (location and history); semi-statistical elements (size, physical appearance, and mentality); and coloring elements (symbolism, behavior, and communication). Structural elements that are good enough do not change DNA if you like are the location (geography and climate) and history (roots). Semi-statistical elements that can be changed, but require time to change, including physical size and appearance, such as superstructure, infrastructure, land use planning, and change. Also included as a semi-statistical element of place identity is the inner mentality of the population, as in cultural and religious values, which are often manifested in language. Color elements include symbols (names, logos or symbols such as flags, costumes, folk dances or maps), behavior and communication.

2.2 Place Branding Strategies

The branding of places and more specifically of cities, has gained an extraordinary momentum among city officials [12]. As such, place marketers are striving to settle the as a brand especially a place destination, with the purpose of promoting to existing and potential target groups; and differentiate themselves from each other, to assert their individuality in pursuit of various economic, political or socio-psychological objectives" [13]. The globalization where competition is very tight, it's time to start thinking about finding new ways to improve the image of the city with the aim of attracting visitors. Therefore, city officials are becoming aware of the importance of branding strategies as the goal of the allocated city marketing budget has reached number expectations. According to [14], there are five steps constitute the key facets of the place branding process shown in figure 2.1
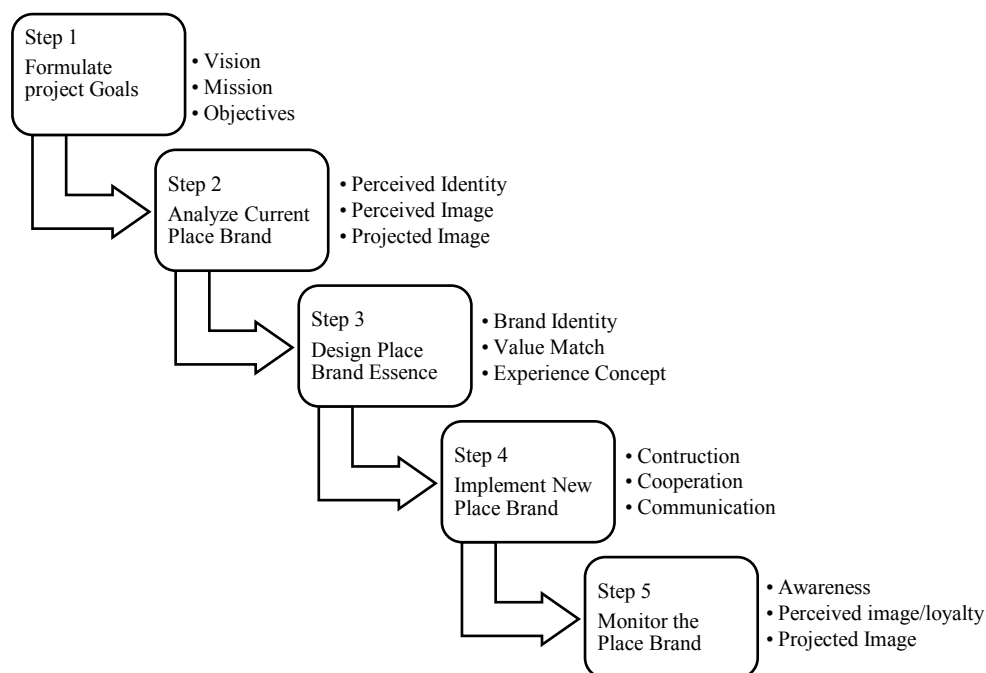
Figure 2.1 Five Steps Approach to Place Branding

(Adapted from the 2009 book by Robert Govers and Frank Go titled Place Branding: Global, Virtual and Physical Identities. Constructed, Imagined and Experienced [14])

Firstly, a place branding project is ideally intended to build an overall perceived image, regardless of priorities in mission when it comes to target tourism, investments, exports or talent. In practice, many places have different organizations that are often building their own different brands. Secondly, it is crucial to underpin decision-making with a thorough analysis to formulate any kind of branding strategies. To specify, it also requires insight at least three major perspectives namely   place identity, perceived place image and projected place image. After the individual examinations, the three major perspectives need to be aligned in order to develop a strong and consistent brand positioning. The third step is the design of the place brand essence is grounded in the brand identity based on the inputs attained from the place brand analysis. The identity, in particular, should incorporate the brand name, values, narrative, visual identity and scope. The next step is to implement the place brand essence triangle, which are an experience concept requires the construction of events, infrastructure (e.g. buildings, landmarks), symbolic actions, and supporting policies. Finally, the effectiveness assessment of the new place brand, a periodic measurement of the brand's equity or brand value need to be taken. The brand equity is built not only through place image and brand satisfaction/loyalty but also through name awareness (i.e. one cannot build a strong image and satisfaction if there is limited awareness of the place brand).

Refers to book [15], countries, states, and cities (whether large or small cities) are beginning to brand their respective images as they try to draw visitors or encourage relocation. Some notable early examples of place branding include "Virginia Is for Lovers" and "Shrimp on the Barbie" (Australia). Recently, every physical location, area, or region considers its place branding. More recent examples include Santa Rosa's new slogan "Place of Plenty" and the "Cleveland Plus" campaign. The San Diego Convention and Visitors Bureau ran an integrated campaign, titled "Happy Happens," in 2009. Las Vegas ran its hugely successful "What Happens Here, Stays Here" campaign beginning in 2003. The ads were meant to sell Las Vegas as an experience. In 2008, the city took a different route, selling Vegas differently and in more practical terms in light of the economy. The "What Happens Here" ads returned in 2009, however, when marketing research showed that consumers missed them.

Apart from branding producers' perspectives, communities have their own preference to select desirable images in this competitive setting. That is why a brand strategy provides the most effective way for small cities to manage their identity and distinguish themselves as the ideal choice option for their targeted customers. It provides much more than a logo and tagline. A genuine brand strategy should act as a strategic guidance system to provide direction for how the place will present itself in terms of sending important messages about offered products and services. Not only that, a unifying city brand sets the directions for using one look, one voice and engaging common themes, images and words when presenting the city and its key precincts and experiences [16].

Promotional activities, word of mouth and the like Activities have an important role in the process of drawing identity in the minds of potential customers. By using an identity profile strategy, tourist destinations are specifically designed for themselves in Indonesia. Pictures of related places and events make a strong contribution to tourists who choose which one they want to visit. Images place the position that holds the destination in the mind of the traveler who travels, heightens their previous expectations for the trip, and deepens the memories of each trip after it's finished. Strong brands not only fulfill rational needs, but they also support emotional responses [17]. A brand produces loyalty, or does not have it, depending on the transition that arises with the client.

2.2.1 The Potential of Place Branding Strategy in City Planning

Brands can be defined as goods or services. It is mixed with his identity, name, image, and respect. This is subject to interpretation by the user himself who did the part. Parts are formed from their image, identity, equality, and desires. According to Ref [18], said that there are many advantages of branding. The benefit is that branding must be based on Ref [18]: Domestic businesses are open with national identity and community goals; An environment where differences are valued and felt; Soaring is very valuable in offering exhibitions around the world; More efficient efficiency in investment promotion; More useful in tourism advertising and business travel; "Effect of country of origin" which is stronger for exporters of goods and services; Exceptional perception in global media;

More direct acceptance into regional and international groups and associations; and, cultural connections that are richer with other regions and countries. These benefits can be obtained if three important components of place branding are understood. First, brands can bring investors, talents, users, tourists, recognition, and admiration. The second component is confident and a strong brand can be attached to activities. The last is the brand has the potential in order because it can help companies in different crowds, who usually argue, to achieve a goal. Sequentially, the thought of being profitable is the complex responsible for that place. The more businesses, the more meaningful profits will be transferred, and the economy will increase. However, these revenue commitments need to be applied for additional improvements. Another advantage, which can be obtained from place branding, includes more significant investment, profits, and export profits. Investment to that place shows the benefits of exports. The advantages of place altruism can be conveyed through branding by containing strong brands and reliability in activities. Users are more sensitive to products or businesses if they are connected with a positive place image or reputation. Thus, it encourages businesses to export their goods and enter other markets, if they are ready to join and understand their cooperation with the values and goals of the place. However, the demands of branding to enter the method of creative communication with stakeholders. The creative process involves planning, communication, design, and ideally, connects users with products and associations.

2.2.2   Public Parks in Place Branding

Urban parks have long played a vital role in community-based programs for all people. Urban parks are now viewed as an important part of the broader structure of urban and neighborhood development rather than just recreation and leisure facilities [19]. Urban green structures include a wide range of different components. Apart from parks, these include woodland, street tree and square plantings, cemeteries, private gardens, green roofs, community and allotment gardens, sports complexes, and so forth. Urban parks have been viewed as an important part of urban and community development rather than just as settings for recreation and leisure. Urban parks have been suggested to facilitate social cohesion by creating space for social interactions [20, 21, 22]. Social cohesion is defined as the extent to which a geographical place achieves 'community' in the sense of shared values, cooperation and interaction [23] Public spaces such as urban parks are potentially of importance because they cater the opportunities for high levels of interaction between persons of different social and ethnic background [24]. For the development of local communities and social ties people have to be able to meet to establish relationship [25]. In addition, interacting with others helps people to participate in society and to create feelings of acceptance [26].

Destinations are considered as brands of tourism. Furthermore, destination image perceptions are often analyzed from demand side viewpoint of tourists visiting the places [27]. Public parks and other urban green spaces have provide numerous functions [28]. The green resources enhance urban quality of life, and contribute to achieve sustainability of cities [29]. Urban green spaces also create and strengthen the positive image of the community and the entire city [30].

Considering parks and green spaces as a theme of city brand is an emerging and an inspiring idea. Urban forestry and greening researchers should start to consider how these green resources can create a brand that favor the decision of people visit, stay and eventually migrate to a city. Many of the urban green spaces have their potential to attract visitors and targeted immigrants [31]. Some cities have long observed their abundant green spaces as advantages in promotion and marketing their cities as livable ones [32]. These resources together with other urban amenities were recognized as important ingredients for smart growth for sustainable cities [33]. As a result, cities with advantageous urban forestry and green spaces have a particularly strong potential of converting these green resources in to effective visual and sensible experiences for user through direct visitation or different forms of communications. This potential can be integrated into the city brand and be reinforced if the green resources (e.g., a public park system) is well recognized as having high brand equity [34]. A park often becomes one of the signature attractions of a city and it can be used as a prime marketing tool to attract tourists, conventions, and businesses. Regional parks help to shape a city's identity and give residents pride in their city [35].

Some studies specifically looked at how attractive urban parks are to tourist and whether parks play a role in tourist's decision to travel to certain cities. For the case of the Indian city of Chandigarh [36], interviewed 904 domestic tourists. More than 1/4 of parks and parks are considered the main factors in making cities attractive, more than that, architecture and culture. The majority of large tourists (89%) consider urban development. In small scale studios in Hong Kong parks [37], 28% of tourists interviewed said that they enjoyed the 'very' park in Hong Kong. In the studio about visitors to Savannah, Georgia, USA [38], found that 306 community contributors to beauty, image, city attraction, and tourist experience, including for example historical sights and increased entertainment facilities. In the Delphi study, they were among 25 ecotourism experts in Taiwan, [39] Finding that 'Environmental Factors' is considered important for achieving ecotourism.

One can wonder whether tourists have different expectations of city parks than locals. Work on this topic was carried out in Hong Kong's Kowloon Park by [40]. In this study, a small number of 36 tourists (61% of whom turned out to be first-time visitors) registered and their use and preferences compared to local users. Tourist preferences are not much different from local users, for example in terms of like open space, water, shade, and places to walk and sit. Differences are recorded in, for example, the way to the park. In addition, tourists are generally more satisfied with parks than local residents [39]. The authors also compared scores for the visual quality of the park, as well as what is

called the preferred index [41]. Here the difference between residents and tourists is noted, with tourists, for example, stating higher preferences for the Chinese garden landscape. With regard to the most unpopular scenes of local residents more sensitive to the utility aspects of the scene and tourists for the maintenance of the park as a whole. Both groups expressed a general preference for greenery and water and did not like the surface being built. A study by Ref [42], shows that travelers to 'green' sites (including city parks) in Tehran, Iran has different landscape preferences according to e.g., age and sex. However, this research has major weaknesses in terms of methodology - at least judging from this paper. Research by [40] in Savannah, Georgia, the US is trying to overcome the possible economic impact of green space on urban tourism. In the study, the willingness of tourists to pay for city urban forests (exemplified through for example parks, but also through, for example, street trees) was assessed. The study estimates the annual value of Savannah's urban forests for tourists is in the range of 81 to 167 million USD, with a 95% confidence interval. The study also noted a large difference in the willingness of tourists to pay, with loyal and better tourists willing to pay more.

2.2.3   Influence of Visitors Perceptions in Place Branding

According to [43], visitor provides support to improve place brands, as well as a device that especially helpful in brand effort. The assessment components are as follows: the presence, this component refers to the international status of a city and how much people know the city; the place, refers to physical aspects, such us how beautiful and pleasant the city is; The Potential, refers to the city's opportunity to offer various activities; The Pulse, refers to how much interest people have towards the city; The People, this component examines the local population I terms of openness; The prerequisites, relates to the basic quality of the city, the standards and costs of accommodation and public comfort. Based on the opinion about place branding above, it can be concluded that the purpose of making place branding efforts is to create an image that influences visitors' decisions to visit these destinations [44], says that an image is a set of beliefs, ideas, and impressions that a person has towards an object. Community attitudes and actions towards an object are determined by the image of the object.

Effort in improving consumer's perceptions of cities turns to be good business in itself. As elaborates in his work, there is an urgent need to discover the untapped potential of cites, because they may be "Indicators of national trends for good or for bad [45]. The importance of places is what connects city branding to cultural geography. Characteristics of identity, differentiation, and personality can be managed to maximize equity and awareness. There is also a focus upon the ever-necessary consumer orientation. From the viewpoint of the end user, a place is seen in terms of the way one senses, understands, uses, and connects to the place [46]. These factors surround the concept and understanding of what perception means. In selecting a destination or park, visitors consider some factors like the park's environment, facilities, rides, and location. Perception [47] is the way in which

an individual gathers, processes, and interprets information from the environment. Ref. [48] stated that perceptions are the beliefs about what a consumer receives from goods or services.

2.3 Place Branding on Internet

Nowadays the most important influence in decision making in most markets for customers is represented by the information found online. According to Alonso and Bae "the possibilities offered by the use of the Internet for city management not only as a channel of distribution but also as a communication channel for urban market have already proved their effectiveness [49]. The Internet has made possible a more varied and detailed form of information for destination places: cities, regions and countries than it had ever existed before. Because the Internet is an interactive medium, it enables social communication through forums, blogs, and social networks and so on. As a result, the visibility of place brands has increased noticeably [49]. "Websites are fundamental tools for communication for place brands. They persuade, convince, help in decision making and finally allow making reservations and purchases" [49]. The official website of a destination is useful for travelers "at the time of exploration and selection of the destination, in the planning stage of the journey, when booking services, during the visit and in the subsequent phase" [49]. An important aspect of the destination's website is symbolized by its aesthetics. Aesthetics can be divided into two main categories: classical and expressive. While, classical aesthetics applied to websites translates into visual clarity (clean, clear and symmetrical), expressive aesthetics applied to websites translates into originality and creativity (special effects and sophistication). Website aesthetics include: pictures, colors and graphical layouts. These items may enhance "visual appeal and information transfer (e.g. attraction photographs, logos and slogans; colors that match logos; destination related backgrounds; online video clips; newsletters and brochures) and visitor's experience and website reliability (e.g. site map, home buttons, search tools, memorable URL, non-graphical version, accurate links, correct spelling, clear and readable text and organized layout)". They are visual elements that are meant to raise interests in the traveler [50]. A great destination website should be attractive, organized and consistent in style, colors and language. In addition, it should use distinctive hot buttons; proper graphics, fonts, colors, page length and multimedia; have a graphic-text balance and use good labeling [50].

2.4 Online Reviews and Marketing Destinations

The rapid spread of the Internet has provided humanity with a new way to obtain information [51]. The internet has now become the biggest source of information, with people conducting ever more searches on the Web. Alongside this, social media, another part of the Internet domain, has also captured the attention of netizens. Social media can take many different forms, one of which is product-review websites. Refers to [16], some of the strongest brands in recent years have been born online. Google, Facebook, and Twitter are three notable examples. That was not always the case. At

the onset of the Internet, many online marketers made serious and sometimes fatal mistakes. Some marketers oversimplified the branding process, equated flashy or unusual advertising with building a brand. Although such marketing efforts sometimes caught consumers' attention, more often they failed to create awareness of what products or services the brand represented, why those products or services were unique or different, and most important, why consumers should visit their Web site. Online marketers now realize the realities of brand building. First, as for any brand, it is critical to create unique aspects of the brand on some dimension that is important to consumers, such as convenience, price, or variety. At the same time, the brand needs to perform satisfactorily in other areas, such as customer service, credibility, and personality. For instance, customers increasingly began to demand higher levels of service both during and after their Web site visits. Successful online brands have been well positioned and have found unique ways to satisfy consumers' unmet needs. By offering unique features and services to consumers, the best online brands are able to avoid extensive advertising or lavish marketing campaigns, relying more on word-of-mouth and publicity.

An online review is essential for businesses to encourage reviews because more and more customers rely on the opinions and experiences of others when making their purchasing decisions. Reviews have the power to reach a larger audience and be more influential (and less expensive) than conventional marketing methods. Online reviews have become an important source of information. They allow customers to look up detailed and trusted information, based on sharing past consumer experiences. Information on travel destinations flow abundantly on the web, Internet, and social media in particular, are currently used to gather information on tourism products and to purchase them. The intrinsic characteristics of tourism products, requiring high levels of information, has been recognized since a long time as a reason for making them an area of extensive use of Information and Communication Technologies, ICTs [52]. Therefore ICTs play a fundamental role in determining the competitiveness of tourism destinations [53].

2.5 Data Mining in Social Networks

Over the past decade, social networking has become not only popular but also an affordable and universally recognized means of communication that has grown rapidly in making the world a global village. Social networking sites are generally known for disseminating information, posting personal activities, product reviews, sharing images online, professional profiles, advertisements, and expressing opinions/sentiments. News alerts, the latest news, political debates, and government policies are also posted and analyzed on social networking sites. It was observed that more and more people became interested and relied on social networks for information in real time. Users sometimes make decisions based on information posted by individuals unknown to social networks [54], which increases the level of trust in the credibility of these sites. Social networking has succeeded in changing

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the way different entities search for and retrieve valuable information regardless of their location. Social networking also gives users the privilege of giving opinions with very little or no restrictions.

Social networks are terms used to review web-based services that allow individuals to create public/semi-public profiles in understandable domains so that they can communicate communicatively with other users on the network [55]. Social networking has improved the concept by supporting the establishment and transfer of User Artificial Content [56]. Simply put, social networking is a graph consisting of nodes and links that are used to represent social relationships on social networking sites [58]. Social networking is an important source of online interaction and content sharing [57,58], subjectivity [59], Assessing [60], obtaining [61], evaluation [62], influence , observation [63], feeling [55], opinions and sentiment responses [64] are expressed in text, reviews, blogs, discussions, news, comments, reactions, or several other documents [65]. Before accessing social networks, a popular homepage was used in the late 1990s that allowed average internet users to share information. However, activities on approved social networks have turned the World Wide Web (www) into a supported creation. The social networking platform allows fast information between users regardless of location. Many organizations, individuals and even state governments now participate in social networks. This network allows large organizations, celebrities, government officials, and government agencies to gain knowledge about how their audiences discuss posts that involve them from the large data generated on social networks. The network that enables effective data conversion. However, the application of efficient data mining techniques can be used by users to find valuable, accurate, and useful knowledge from social network data. Data mining techniques have found able to control three dominant disputes with social network data, namely; size, comfort, and dynamism. A collection of social network data that requires a lot of automatic information to analyze it at a reasonable time. Interestingly, data mining techniques also require very large data sets to mine the extraordinary patterns of data; Social networking sites have managed to become perfect sites for mining with data mining tools [68].Recent research projects in two closely related areas of computer science machine learning and data mining have developed methods for constructing statistical models of network data. Examples of such data include social networks, networks of web pages, complex relational databases, and data on interrelated people, places, things, and events extracted from text documents. Such data sets are often called "relational" because the relations among entities are central (e.g., acquaintanceship ties between people, links between web pages, or organizational affiliations between people and organizations) [66]. These algorithms differ from a substantially older and more established set of data mining algorithms developed to analyze propositional data. Propositional data are individual records, each of which can be represented as an attribute vector and each of which are assumed to be statistically independent of any other. For example, a propositional data set for learning medical diagnostic rules might represent each patient as a vector of diagnostic test results, and analysis would assume that knowing the disease of one patient tells you nothing about another patient. In contrast,

analysis of a relational representation of the same data would retract this latter assumption and add information about familial relationships, workplace contacts, and other relationships among patients that might influence their medical status.

2.6 Opinion Analysis on Social Network

User opinions about social networking site look positive or negative about a variety of interesting problems. This convincing opinions and indicators can be used as motivation compilation make choices and decisions about the protection of certain products and service or even political candidate support during elections [67], [68]. Although online opinions can be found using the traditional opinion method, this reverse form is inadequate given the large volume information generated on social networking sites. This fact underlines the relevance of data mining techniques agreed upon in mining social opinion network site. Extensive information facing the challenges of automatic summarization. Definition of opinions and quantitative considerations are important techniques for accept opinion. Definition of opinions can be found in text, sentences or topic in the document; it can also be in the entire document. Opinion the summary summarizes the various opinions that are posted on the writing by analyzing polarity sentiments, degrees, and related events.

The author in [69] uses Support Vector Machine (SVM) with a linear kernel to use a neutral example in the document. Approved results three problems complicated using coupling in pairs while enlarging the results inside an extraordinary way. Extraction of opinions is very important for summarization and subsequent tracking. Text, topics, and documents sought for extraction approval section. Need to be summarized because of not all Opinions issued in documents are expected to be important to issue under consideration. The quiet balanced opinion is useful for business and the government because it helps in improving policies and products respectively [70], [71].

2.7 Product Rating and Reviews

Dependence on the internet (especially social networking sites) for information when making choices about products or services has increased the need for word-of-mouth electronic research. Ranking of products (services) and reviews often contain expressions of sentiment [72]; [73], an item can be judged based on the mood of the reviewers at that time [74]. Social networking sites like Epinions and Ciao allow users to build a network of trust between them showing who to trust in offering product reviews and ratings. Most online stores share the opportunity for their customers to do value / review the products or services they buy. This process allows prospective customers to have access to first-hand information about this product/service before making a purchase. Bad value or product/service reviews tend to attract very low patronage or no patronage at all. Data mining tools are used to analyze the concepts of product rankings and reviews on social networks. The experiment

in [75] proposed an advanced level of factorization matrix method that was able to improve ranking predictions and estimate the strength of accurate trust associations in the same period. Their work shows that although general users who trust other people in the same network tend to rank the same over time (homophiles and social influences), this does not imply similar preferences. Furthermore, [76] proposed a simplified context that exploited multi-capital social networks that provided recommendations on goods in the social ranking network (SRN). Using the Social-Union Method that associates the matrix of similarities derived from them is a heterogeneous (unipartite and bipartite) SRN which concludes or implied that social unity does something that is well-known to existing system recommendations.

According [77], Rating and Reviews (RnR) is a conceptual architecture created as an interactive structure. User-oriented input that develops reviews is relatively new. The user provides the name of the product or service whose previous performance has been reviewed online by the customer. This system checks through the reviewed corpus to find out if it is cached in the local architecture for the latest reviews. If the data provided turns out to be new, then the data is then used. If it turns out obsolete, crawling is done on secondary sites like TripAdvisor.com and Expedia.com. Data taken on this site was then built locally to find the necessary justification. The RnR architecture produces complete comments about products and services (currently being reviewed) in the timeline using temporal dimension analysis with scatter plots and linear regression. Multiple words marking is used for domain ontologies that can be accessed free for feature identification. This is because marking POS from every word in all reviews and the process of identifying opinions can be time-consuming and computationally expensive even though it produces high accuracy. The use of neighboring words (words around the occurrence of features) also helps reduce computational overhead.

Ref [78], Latent Aspect Rating Analysis (LARA) approach attempts to analyze opinion borne by different reviewers by doing a text mining at the point of topical aspect. This enables the determining of every reviewer's latent score on each aspect and the relevant influence on them when arriving at an affirmative conclusion. The revelation of the latent scores on different aspects can instantly sustain aspect-base opinion summarization. The aspect influences are proportional to analyzing score performance of reviewers. The fusion latent scores and aspect influences are capable of sustaining personalized aspect-level scoring of entities using just those reviews originated from reviewers with comparable aspect influences to those considered by a particular user. Ref [79], An aspect-based summarization make use of a set of user reviews of a subject as input and creates a set of important aspects taking into consideration the combined sentiment of each aspect and supporting textual indication. Sentiment analysis tools used for social network analysis commonly utilize sentimental words often compiled into sentiment lexicon (also known as sentiment dictionary).

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Chapter 3. Research Area and Data Sources

3.1 Study Site

3.1.1 An Overview of Bandung City

Bandung is the capital city of West Java, a province of Indonesia and the country's third largest city. It has a population of 2.5 million according to the 2015 census. It has the vision to be a service city that is clean, prosperous, obedient, and friendly [1].
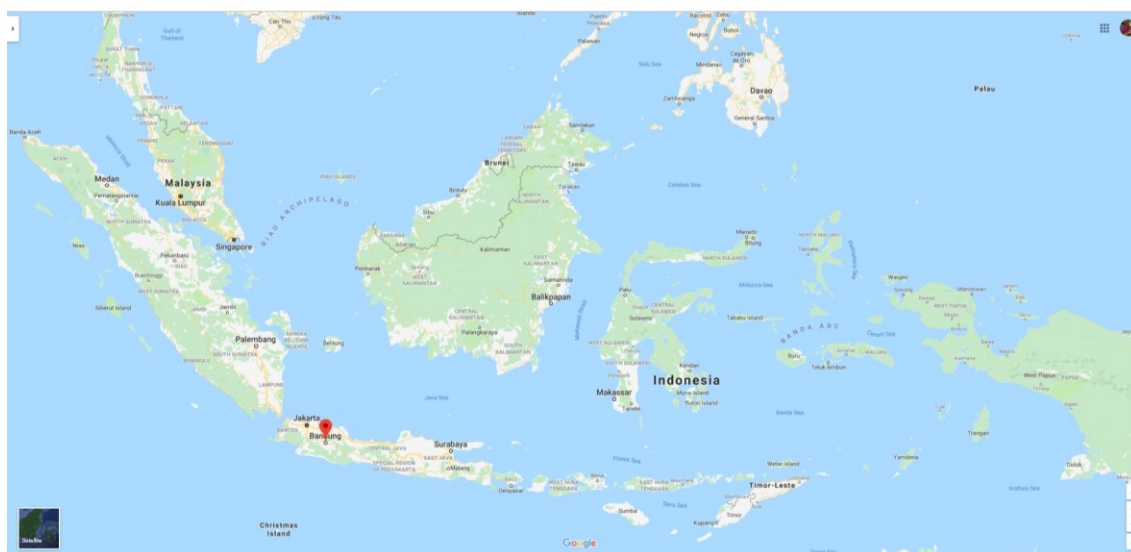
Figure 3.1 Bandung City, West Java, Indonesia.

Source: Google Maps, 2019

The city of Bandung is located at position 107 ° 36 'East Longitude and 6 ° 55' South Latitude. Meanwhile, the area of Bandung is 16,729.65 Ha. In the calculation of this area is based on the Regional Regulations Municipality Level II Bandung No. 10 of 1989 on the Changes Boundary Regional Municipality Level II Bandung. Then, the administrative city of Bandung is also bordered by several other cities / districts:

1. North: bordered by Bandung Regency and West Bandung Regency;

2. West: bordered by Cimahi City;

3. East: bordered by Bandung Regency; and

4. South: bordered by Bandung Regency

3.1.2 Demographical Condition of Bandung City

Demographic developments are an important role in development planning. The quantity of population is a large capital which can determine the success of a development in the region. The composition and distribution of the size of the population can affect the structure of space, social activities, and the economy of society. All aspects of development have a correlation and integration with the number of demographics in a region, so it is not surprising that the information of a population could be said as an important role in a strategic position of a policy determination.
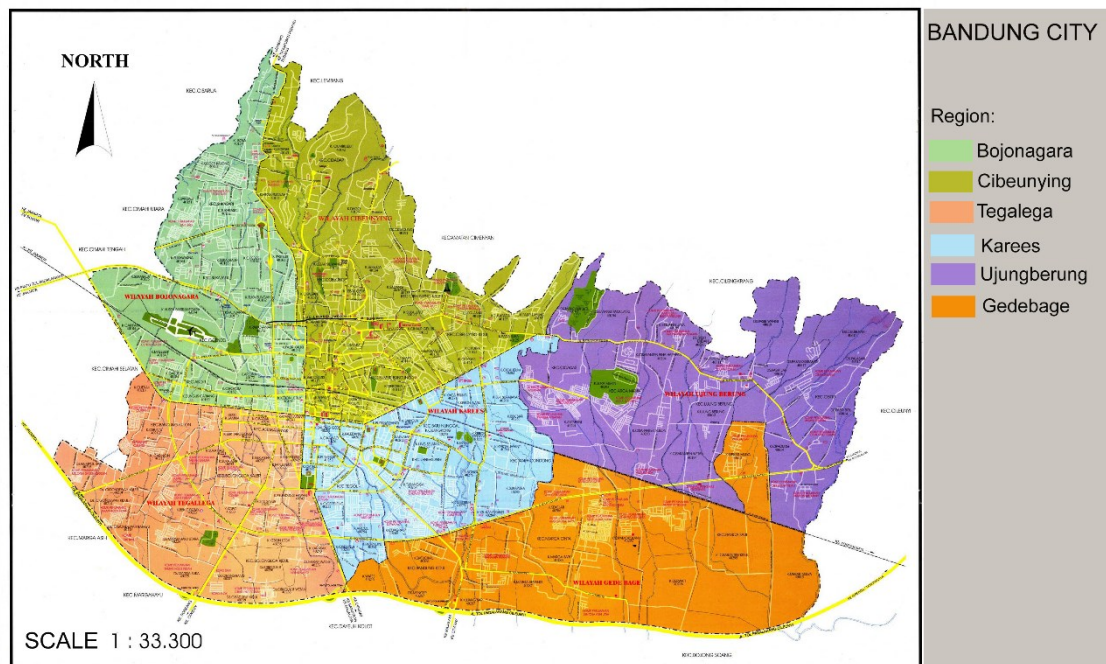
Figure 3.2 The Sub City Region of Bandung.
Source: RTRW Kota Bandung 2011–2031, with authors' modification

Bandung city is divided into 30 districts covering 151 sub districts. Gedebage district is the largest district with 9.58 km^2 area. Astanaanyar is the district with the smallest area, that is, 2.89 km^2. For development purposes, the 30 districts are grouped into 6 sub-city regions. The sub-city regions of Bandung are Bojonagara, Cibeunying, Tegalega, Karees, Ujungberung, and Gedebage.

Table 3.1 Total Area by District in City of Bandung, 2017

No	District	Total Area (square.km)	Percentage (%)
1	Bandung Kulon	6.46	3.86
2	Babakan Ciparay	7.45	4.45
3	Bojongloa Kaler	3.03	1.81
4	Bojongloa Kidul	6.26	3.74
5	Astanaanyar	2.89	1.73
6	Regol	4.30	2.57
7	Lengkong	5.90	3.53
8	Bandung Kidul	6.06	3.62
9	Buah Batu	7.93	4.74
10	Rancasari	7.33	4.38
11	Gedebage	9.58	5.73
12	Cibiru	6.32	3.78
13	Panyileukan	5.10	3.05
14	Ujungberung	6.40	3.83
15	Cinambo	3.68	2.20
16	Arcamanik	5.87	3.51
17	Antapani	3.79	2.27
18	Mandalajati	6.67	3.99
19	Kiaracondong	6.12	3.66
20	Batununggal	5.03	3.01
21	Sumur Bandung	3.40	2.03
22	Andir	3.71	2.22
23	Cicendo	6.86	4.10
24	Bandung Wetan	3.39	2.03
25	Cibeunying Kidul	5.25	3.14
26	Cibeunying Kaler	4.50	2.69
27	Coblong	7.35	4.39
28	Sukajadi	4.30	2.57
29	Sukasari	6.27	3.75
30	Cidadap	6.11	3.65
	Total	167.31	100

Source: Bandung City Statistics Center, 2019

Bandung population were 2.497.938 people consisting of 1.260.204 inhabitants of the male and 1.237.734 female population people. When it is compared with the number in previous year, it has increased 0, 29 percent. To be more detail, the distribution of administrative area and population throughout all districts can be seen in the Figure 3.3 and Table 3.2.
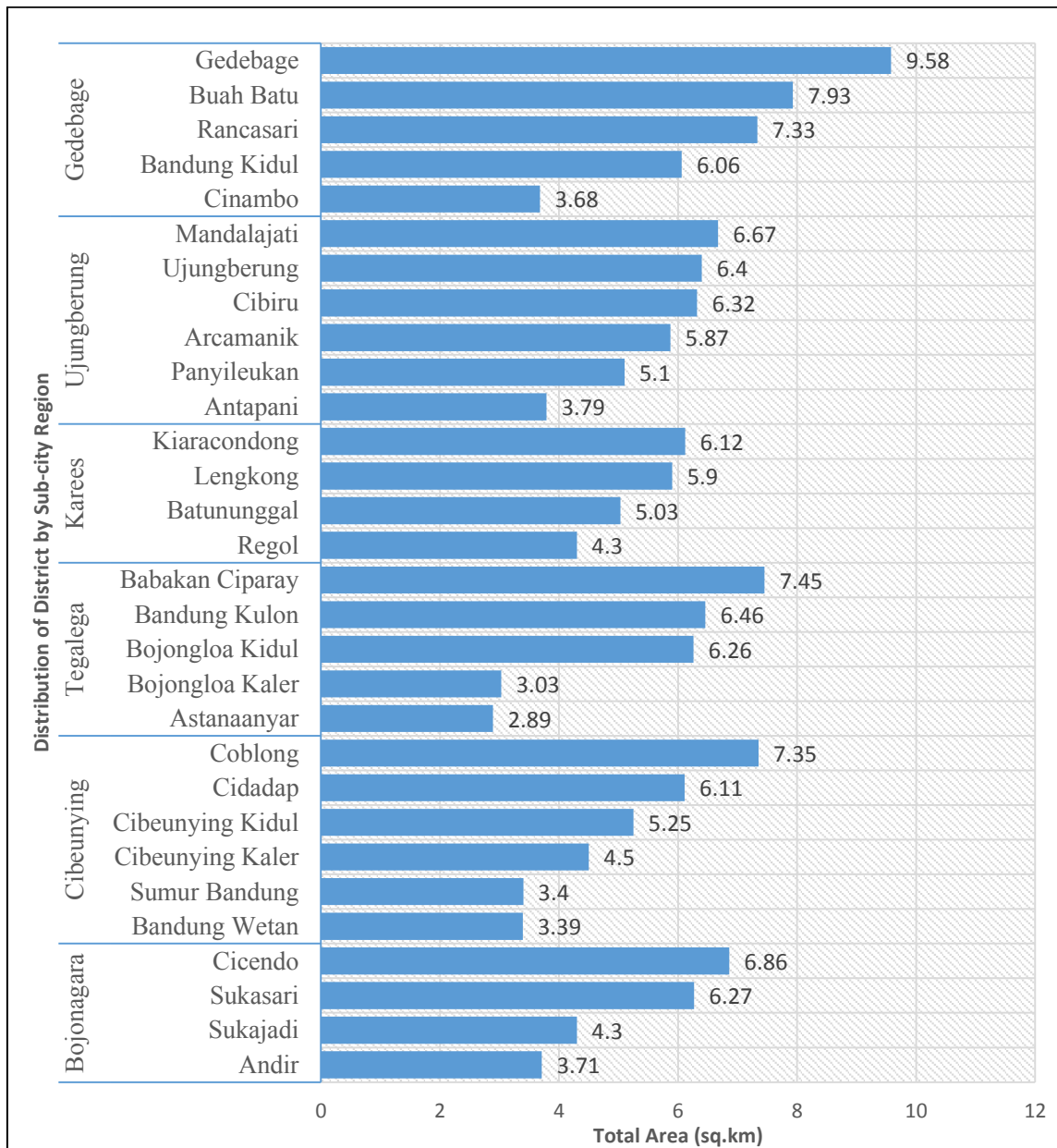
Figure 3.3 Distribution of Total Area by District in City of Bandung, 2017

The graph compares each district's area and its percentage to the total area of Bandung City. It can be seen that the difference of each area is actually not too wide. The smallest district is Astanaanyar that has 1.73% of the total area while the largest district is Gedebage which lie on 5.73% of the total area of Bandung City. From this administrative territory perspective, each district actually has more or less similar benefits as well as drawbacks. However, the difference of facilities and activities distribution triggered the different level of attractiveness. Consequently, the population distribution of each district is varied implicating on its population density. The data of population density can be seen in the table 3.2 and figure 3.4.

Table 3.2 Population Distribution and Density by District in the City of Bandung, 2017

No	District	Percentage of Total Population (%)	Population Density (thousand person per sq.km)
1	Bandung Kulon	5.79	22.39
2	Babakan Ciparay	5.98	20.05
3	Bojongloa Kaler	4.89	40.35
4	Bojongloa Kidul	3.49	13.93
5	Astanaanyar	2.78	24.06
6	Regol	3.31	19.24
7	Lengkong	2.89	12.25
8	Bandung Kidul	2.40	9.88
9	Buah Batu	3.85	12.12
10	Rancasari	3.02	10.30
11	Gedebage	1.43	3.73
12	Cibiru	2.81	11.13
13	Panyileukan	1.57	7.71
14	Ujungberung	3.02	11.80
15	Cinambo	0.99	6.74
16	Arcamanik	2.74	11.66
17	Antapani	3.01	19.82
18	Mandalajati	2.54	9.51
19	Kiaracondong	5.33	21.75
20	Batununggal	4.88	24.25
21	Sumur Bandung	1.44	10.57
22	Andir	3.94	26.53
23	Cicendo	4.03	14.67
24	Bandung Wetan	1.24	9.17
25	Cibeunying Kidul	4.37	20.78
26	Cibeunying Kaler	2.87	15.95
27	Coblong	5.33	18.11
28	Sukajadi	4.38	25.42
29	Sukasari	3.31	13.18
30	Cidadap	2.35	9.62
	Total	100	14.93

Source: Bandung City Statistics Center

In general, it was recorded that population density in Bandung city on average is about 14.93 thousand people per square kilometer.
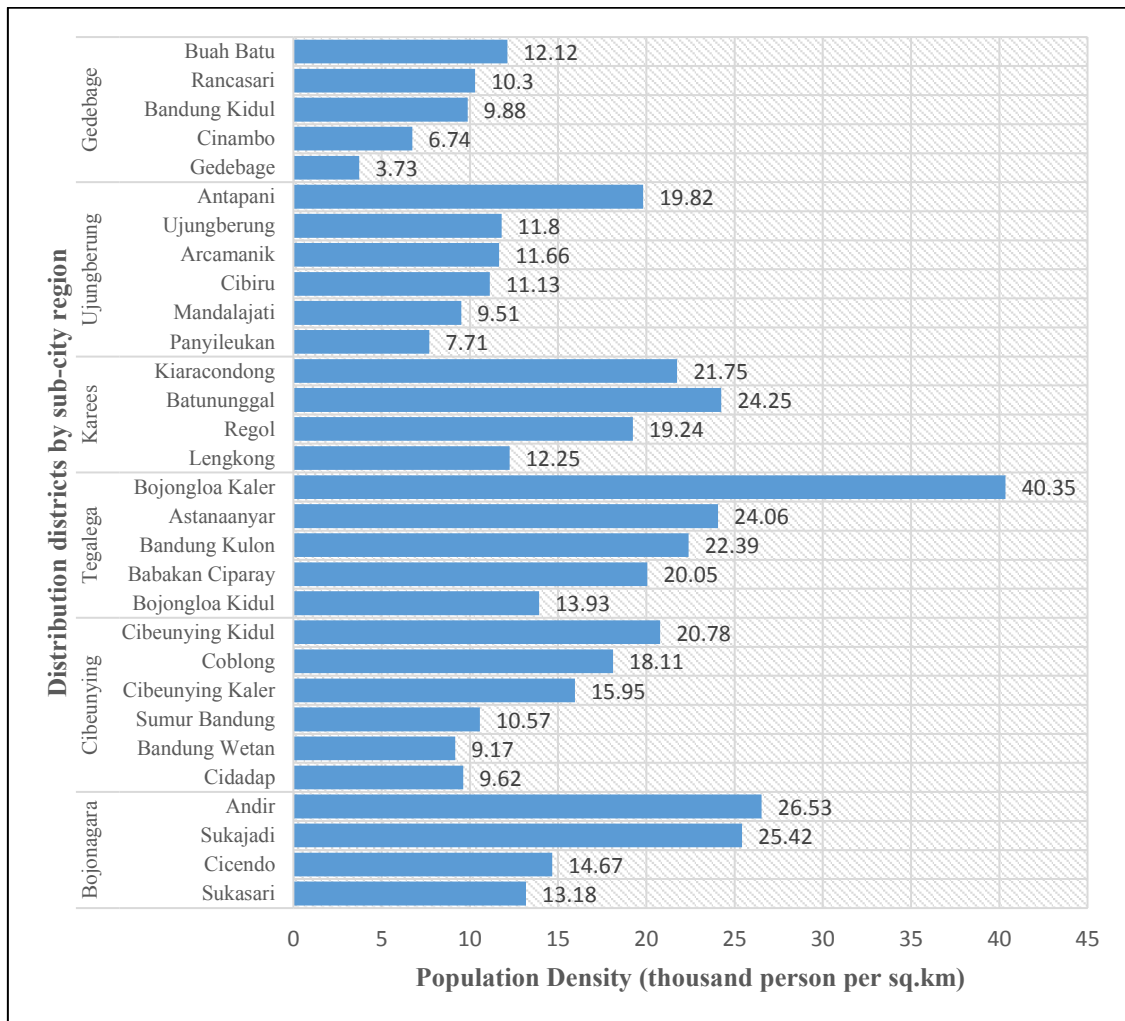
Figure 3.4 Population Distribution and Density by District in Bandung City

Specifically, Bojongloa Kaler is the densest district, which is about 40.35 thousand people per square kilometer, although its population is not the highest. This is because this district is the second smallest district in Bandung. On the other hand, it is recorded that Gedebage District has the lowest density while Cinambo districts has the smallest amount of population.

In this research we also collected data on the sex ratio of the population in Bandung to elaborate the demographic structure of this city in the gender basis. The figure of this issue is illustrated by table 3.3 and figure 3.5.

Table 3.3 Population and Sex Ratio by District in the City of Bandung, 2017

No	District	Sex (thousand)			Sex Ratio
		Male	Female	Total	
1	Bandung Kulon	73.0	71.6	144.6	101.96
2	Babakan Ciparay	76.8	72.6	149.4	105.79
3	Bojongloa Kaler	62.9	59.3	122.2	106.07
4	Bojongloa Kidul	45.1	42.1	87.2	107.13
5	Astanaanyar	34.9	34.6	69.5	100.87
6	Regol	41.4	41.3	82.7	100.24
7	Lengkong	35.9	36.4	72.3	98.63
8	Bandung Kidul	30.0	29.8	59.8	100.67
9	Buah Batu	48.3	47.8	96.1	101.05
10	Rancasari	37.9	37.6	75.5	100.80
11	Gedebage	17.9	17.9	35.8	100.00
12	Cibiru	35.8	34.5	70.3	103.77
13	Panyileukan	19.9	19.4	39.3	102.58
14	Ujungberung	38.4	37.1	75.5	103.50
15	Cinambo	12.7	12.1	24.8	104.96
16	Arcamanik	34.8	33.7	68.5	103.26
17	Antapani	37.8	37.3	75.1	101.34
18	Mandalajati	32.3	31.2	63.5	103.53
19	Kiaracondong	67.0	66.2	133.2	101.21
20	Batununggal	62.3	59.7	122.0	104.36
21	Sumur Bandung	18.1	17.8	35.9	101.69
22	Andir	50.1	48.4	98.5	103.51
23	Cicendo	50.7	49.9	100.6	101.60
24	Bandung Wetan	15.4	15.7	31.1	98.09
25	Cibeunying Kidul	55.3	53.8	109.1	102.79
26	Cibeunying Kaler	36.8	34.9	71.7	105.44
27	Coblong	69.9	63.2	133.1	110.60
28	Sukajadi	54.9	54.4	109.3	100.92
29	Sukasari	41.3	41.3	82.6	100.00
30	Cidadap	30.0	28.8	58.8	104.17
	Total	1267.6	1230.4	2498.0	102.68

Source: Bandung City Statistics Center
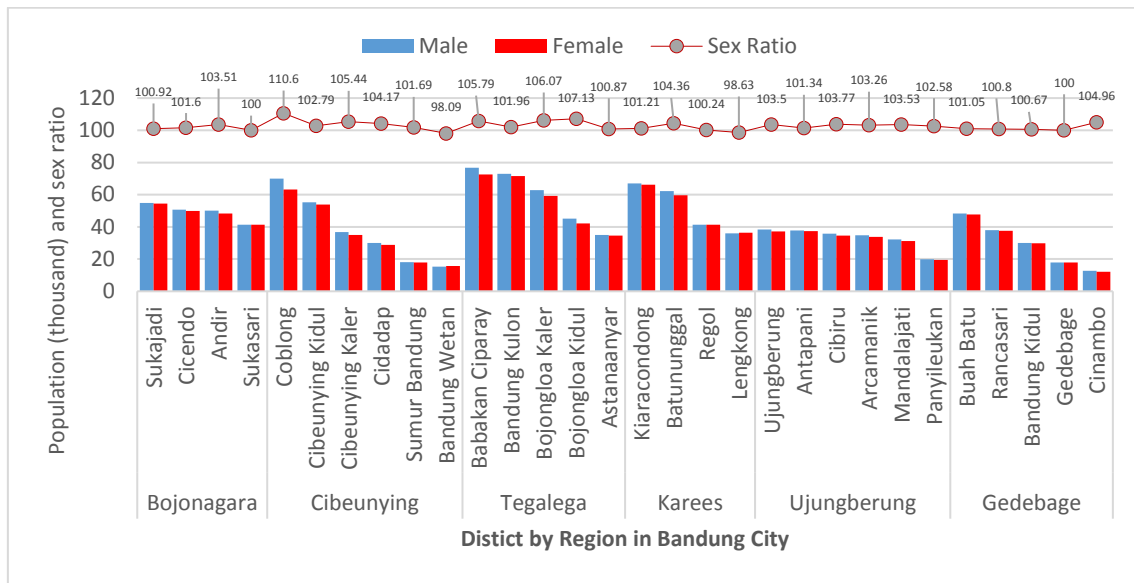
Figure 3.5 Population and Sex Ratio by District in Bandung

Table 3.3 and figure 3.5 show the sex ratio of Bandung City population. The sex ratio means the comparison between male populations to female populations. In general, the sex ratio of Bandung population is 102.68%, which means that male population is 1.0268 times female population. In another word, male population is slightly higher than female population. Almost all districts have similar trend except Sumur Bandung and Bandung Wetan district. In these two districts, male population is slightly less than female population.

3.1.3 The Green Open Spaces Policy of the City of Bandung

According to the 2011–2031 Regional Spatial Plan, the City of Bandung aims to be a green city in the future, where multiple park elements and green spaces are available. Efforts to meet the green open space goals require the building of neighboring parks, community housing parks, urban parks, sub-district parks, city parks, urban forests, green lanes, cemeteries, river banking, and railway lines.

Bandung Green Open Space Master Plan Year 2012-2031 [2] the existing park area in the city is 218.07 Ha, while parks are planned to contribute 15.92 percent (2713.9 Ha) of urban green open space requirements. This means that 2495.8 Ha of land needs to be made available for parks in the city of Bandung. The data obtained from the Housing and Settlement Area, Land and Park Office of Bandung City in 2017 states that Bandung has 627 parks (including thematic parks) scattered throughout the city [3].

Table 3.4 Number and Distribution of Parks in the City of Bandung, 2017

Region	District	District Size (km²)	Population in 2016	Population Density (per km²)	Unit	Number of Parks
Bojonagara	Sukasari	6.27	81,908	13,063	48,356.27	24
	Sukajadi	4.30	108,375	25,203	57,759.53	29
	Cicendo	6.86	99,752	14,541	47,823.83	31
	Andir	3.71	97,553	26,295	44,368.18	15
Sub total		21.14	387,588	15.580 (average)	198,307.81	99
Cibeunying	Cidadap	6.11	58,672	9,603	9,766.08	8
	Coblong	7.35	131,530	17,895	255,264.72	38
	Bandung Wetan	3.39	31,124	9,981	310,661.75	54
	Sumur Bandung	3.40	36,579	10,759	62,329.44	26
	Cibeunying Kidul	5.25	107,806	20,534	13,516.89	12
	Cibeunying Kaler	4.50	70,924	15,761	32,372.58	13
Sub total		30.00	436,635	14,089(average)	683,922.46	151
Tegalega	Astana Anyar	2.89	68,830	23,817	8,873.61	5
	Babakan Ciparay	7.45	147,096	19,744	3,036.00	2
	Bandung Kulon	6.46	142,411	22,045	6,709.23	3
	Bojongloa Kidul	6.26	85,668	13,685	549.2	4
	Bojongloa Kaler	3.03	120,405	39,738	10,389.83	16
Sub total		26.09	564,410	23,806(average)	29,557.87	30
Karees	Kiara Condong	6.12	131,972	21,564	8,866.50	17
	Batununggal	5.03	120,927	24,041	29,173.85	8
	Lengkong	5.90	71,187	12,065	60,126.90	41
	Regol	4.30	81,467	18,946	209,341.14	13
Sub total		21.35	405,553	19,154(average)	307,508.39	79
Ujungberung	Antapani	3.79	74,461	19,647	25,439.44	29
	Arcamanik	5.87	69,313	11,808	687,045.69	34
	Mandalajati	6.67	63,578	9,531	92,452.57	20
	Ujungberung	6.40	76,902	12,016	7,067.00	7
	Panyileukan	5.10	40,248	7,892	48,451.65	53
	Cibiru	6.32	72,016	11,395	8,409.00	6
Sub total		34.15	396,518	12,048(average)	868,865.35	149
Gedebage	Buah Batu	7.93	95,108	11,993	29,491.20	39
	Rancasari	7.33	76,895	10,490	32,449.81	49
	Bandung Kidul	6.06	58,957	9,729	29,173.85	27
	Cinambo	3.68	25,231	6,856	5,745.00	5
	Gedebage	9.58	37,082	3,871	-	-
Sub total		34.58	293,363	8,588 (average)	96,859.86	120
Total		167.31	2,484,037	15,544	2,185,010.74	627

Source: DPKP3 Kota Bandung

The provision of thematic parks in residential neighborhoods is the main driver of the new movement for public space that functions as a source of entertainment and recreation for the urban community with attractive physical design and facilities. Ideally, the provision of urban parks targets on the basis of the needs, desires, and problems faced by the urban community based on bottom-up policies [4].

The Bandung Urban Spatial Plan 2011-2031, based on Regulation of Minister of Public Works No.5/PRT/M Year 2008 Concerning Guidance of Green Open Space Utilization and Utilization in Urban Areas [5], stipulates that Bandung needs at least 2.858 parks (with a required area of about 1,272,500 m^2). This number of parks is made up of 256 Community Unit (RT/RW) parks with a required area of about 644,000 m^2; 258 neighborhood parks with a required area of around 322,500 m^2; 18 sub-district parks of about 162.000 m^2; and 6 urban parks with a required area of about 144.000 m^2. The parks in the city of Bandung have been distributed over all its districts. The Bandung City Department of Housing and Settlement Areas, Land and Landscape (DPKP3) stated that the provision of parks in Bandung is determined by the availability of land owned by the government of Bandung. The aspect of the availability of land belonging to the city government is the basis for the preparation of the Master Plan based on the Spatial Plan and the Detailed Spatial Plans of Bandung. Table 3.4 and figure 3.6 present an overview of the distribution of parks in Bandung
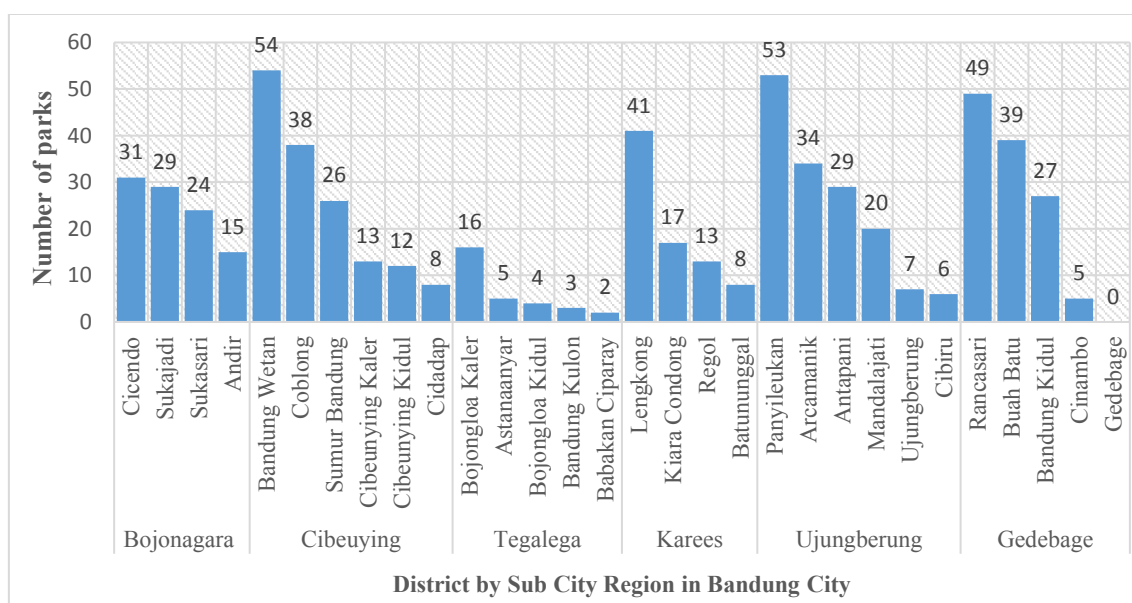
Figure 3.6 Number and Distribution of Parks in the City of Bandung in 2017

Table 3.4 and figure 3.6 describes the number of parks and its distribution in Bandung. Besides, we overlaid this information with population distribution. In the initial assumption, we considered that the distribution of the parks would be directly proportional with the population distribution. However, we found notable data that in some districts the trends were inversely proportional. In Bandung Wetan,

for instance, the percentage of this district's population to the total population is the lowest but the number of parks in this district is the highest. By contrast, Babakan Ciparay has the highest percentage of population but the number of parks in this district is the lowest. To explain that trends, we investigated the data of districts' area and the population density. As a matter of fact, Bandung Wetan has low population density even though its area is not too large but Babakan Ciparay has high population density in spite of its big area.

3.1.4 Thematic Parks

In 2013, the leadership of the new Mayor was Mr. Ridwan Kamil, City Cemetery and Garden Service (DISKAMTAM) Bandung was instructed to re-revitalize the parks in the city of Bandung. This was done because of the lack of public space in the city of Bandung, so the community is limited in activities in city parks and the many problems that occur with existing parks. The parks are revitalized again, with the aim that the park can be an attraction for residents of Bandung to interact with their families or with other residents in the city parks.

Thematic parks [6] are parks created with a certain theme/concept as a unique characteristic. They include certain characters, so that when people see them they are able to interpret a more specific function of the park. The basic characteristics of thematic parks include function, location, and potential. The added physical attractiveness of thematic parks invites citizens to come and enjoy activities in these public spaces [7]. The thematic concept has been adopted in Bandung, where renovations of parks with a thematic design has been used to revitalize urban parks to promote the characteristics of a happy city with increased interactions with public spaces and an increase in the quantity of open green spaces [8]. The theme of a place is developed by unique and distinctive elements; the theme needs to be specific [9]. Thematic parks aim to differentiate themselves from other parks [10]. Successful development of a theme park should further affect visitors' experiences and increase their repeat visits. Ref. [11], theme park operators should attract visitors with an increased number of rides that cater to various segments, ranging from adventurous rides to those for kids. Ref. [12] mentioned the selection of the theme is extremely important to the operations of the park. In general, theme parks attempt to create an atmosphere of another place and time, and usually emphasize one dominant theme around which architecture, landscape, rides, shows, food services, costumed personnel, retailing are orchestrated. Attachment to the design and space is closely related to how the physical setting of the place.

According to Ref.[13], the physical setting that gives meaning to an individual may vary, either in the form of the built environment such as houses, roads, and special buildings; as well as the natural environment such as lakes, parks, forests, and mountains. Mentioned by Ref. [14], the landscape is an important factor in creating the character of a place in the thematic parks has potential to affect public

interest visually and spatially which lead to creating attachment relationship to the physical environment. Thematic parks are needed to realize the green city concept in Bandung.
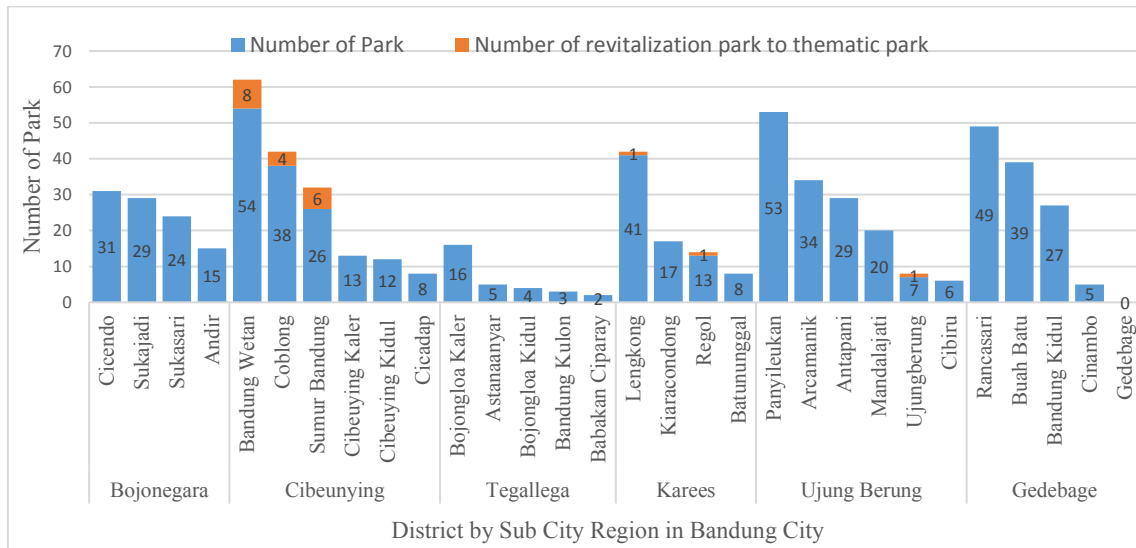
Figure 3.7 Distribution of Revitalization Parks in Bandung City to Thematic Parks

Figure 3.7 shows the distribution of park and distribution revitalization of park in 6 regions Bandung City. The blue bar color is the count of park each districts, and the orange bar color is the number of revitalization of park. Distribution of parks by revitalizing the park to the park with a thematic concept of the majority in the Cibeuying region. In this research selected Cibeuying region as case study.
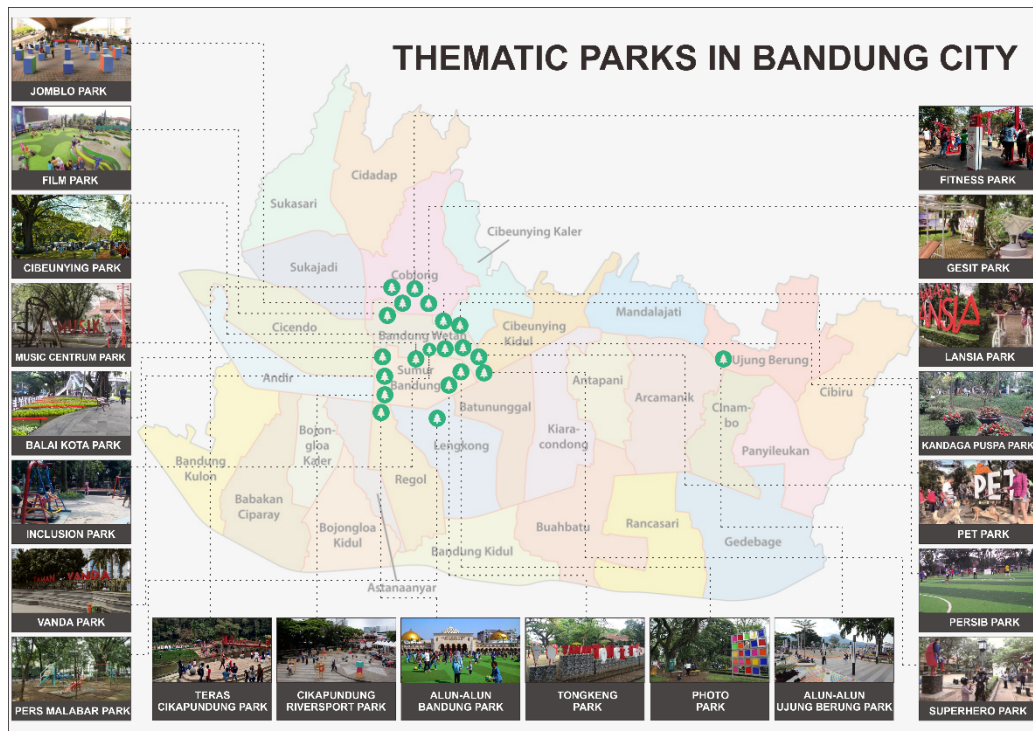
Figure 3.8 Distribution of Thematic Parks in Bandung city

Table 3.5 Revitalization of Parks in Bandung City (Thematic Parks) 2013-2016

No	Name of Park	District	Area (sq. m)	Revitalized (year)	Location
1	Pet Park	Bandung Wetan	6085	2016	Jl. Ciliwung No.14, Cihapi
2	Inclusion Park	Bandung Wetan	2111	2016	Jln. Aceh-Jln Saparua
3	Kandaga Puspa Park	Bandung Wetan	4200	2013	Jl. Cisangkuy dan Cilaki, Bandung Wetan
4	Film Park	Bandung Wetan	1100	2014	Jl. Layang Pasupati, Tamansari, Bandung Wetan
5	Lansia Park	Bandung Wetan	16257	2014	Jl. Cisangkuy, Bandung Wetan
6	Superhero Park	Bandung Wetan	2051	2015	Jl. Bengawan, Cihapit, Bandung Wetan
7	Persib Park	Bandung Wetan	11760	2015	Jl. W.R. Supratman No.24, Cihapit
8	Cibeunying Park	Bandung Wetan	5145	2015	Jalan Taman Cibeunying Selatan, Cihapit
9	Photo Park	Sumur Bandung	3610	2013	Jalan Kemuning No.4, Sumur Bandung
10	Balai Kota Park	Sumur Bandung	13800	2014	Jl. Wastukencana No. 2, Babakan Ciamis
11	Centrum Music Park	Sumur Bandung	2100	2014	Jl. Sumbawa No.32, Merdeka
12	Cikapudung Riverspot Park	Sumur Bandung	2839	2015	Jl. Dr. Ir. Sukarno, Braga
13	Tongkeng Park	Sumur Bandung	3610	2015	Jl. Tongkeng No.46, Merdeka
14	Vanda Park	Sumur Bandung	1554	2015	Jalan Merdeka No.9, Babakan Ciamis
15	Fitness Park	Coblong	4073	2014	Jl. Teuku Umar, Lebakgede, Coblong
16	Jomblo Park	Coblong	1539	2014	Jl. Taman Sari No.66, Lb. Siliwangi, Coblong
17	Gesit Park	Coblong	755	2015	Jl. Dipatiukur, Lebakgede, Coblong
18	Teras Cikapundung Park	Coblong	5128	2015	Jl. Siliwangi, Cipaganti, Coblong, Hegarmanah
19	Pers Malabar Park	Lengkong	3675	2015	Jl. Palasari No.1, Malabar, Lengkong
20	Alun-alun Ujungberung Park	Ujungberung	5257	2016	Jalan A.H. Nasution, Ujungberung, Cigending
21	Alun-alun Bandung Park	Regol	10098	2014	Jalan Asia Afrika, Balonggede, Regol

Source: DPKP3 Kota Bandung

From Figure 3.8 we can see the distribution of thematic parks in Bandung City. There are 21 thematic parks spread across several sub-districts in 3 regions in the city of Bandung. There is 1 thematic parks in the Ujungberung region, 2 thematic parks in Karees region, and 18 thematic parks in Cibeunying region.

3.1.5 Deciding the Thematic Parks Study

Based on the distribution of thematic parks in the city of Bandung, the region of Cibeunying is an area with the largest thematic park intersection with a total of 18 thematic parks, 2 thematic parks in the region of Karees, and 1 thematic park in the Ujungberung region. Based on the number of the thematic park, the authors decided that the study locations in the Cibeuying area were in 3 districts, Sumur Bandung, Bandung Wetan, and Coblong.
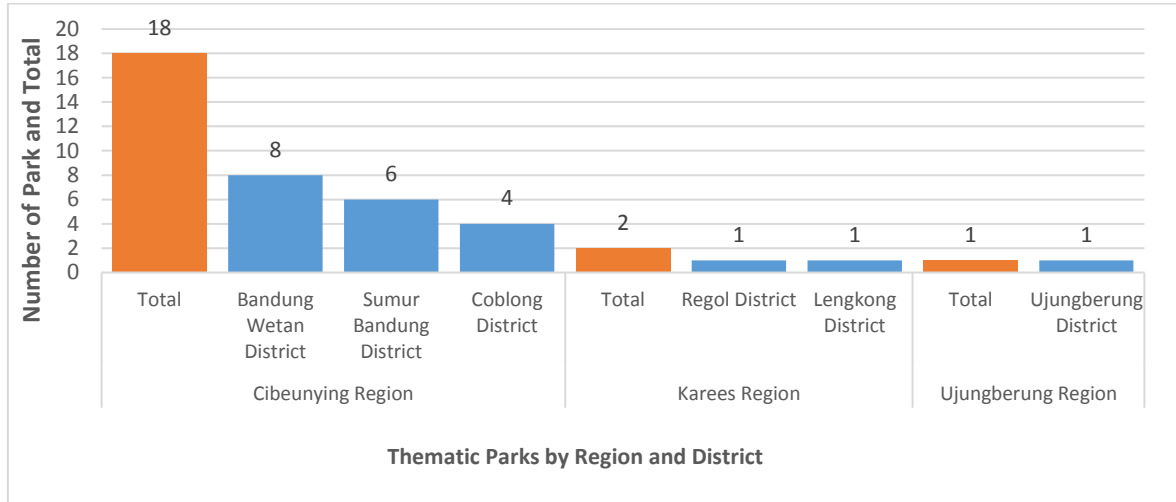
Figure 3.9 Distribution of Thematic Parks by Region and District

The park sample selected based on orientation of parks. Name of park appropriate to the theme and orientation to place, community and activity, consider the segmentation of park branding. The thematic parks based on the park orientation. Based on naming of the park according to the concept and design of the thematic parks we took 10 parks that represent these criteria.

Table 3.6 10 Thematic Parks as Study Site

No	Name of Park	District	Location
1	Centrum Music Park	Sumur Bandung	Jl. Sumbawa No.32, Merdeka
2	Photo Park	Sumur Bandung	Jalan Kemuning No.4, Sumur Bandung
3	Gesit Park (Agile Park)	Coblong	Jl. Dipatiukur, Lebakgede, Coblong
4	Fitness Park	Coblong	Jl. Teuku Umar, Lebakgede, Coblong
5	Jomblo Park (Single Park)	Coblong	Jl. Taman Sari No.66, Lb. Siliwangi
6	Film Park	Bandung Wetan	Jl. Layang Pasupati, Tamansari
7	Lansia Park (Elderly Park)	Bandung Wetan	Jl. Cisangkuy, Bandung Wetan
8	Superhero Park	Bandung Wetan	Jl. Bengawan, Cihapit, Bandung Wetan
9	Pet Park	Bandung Wetan	Jl. Ciliwung No.14, Cihapi, Bandung Wetan
10	Inclusion Park	Bandung Wetan	Jln. Aceh-Jln Saparua
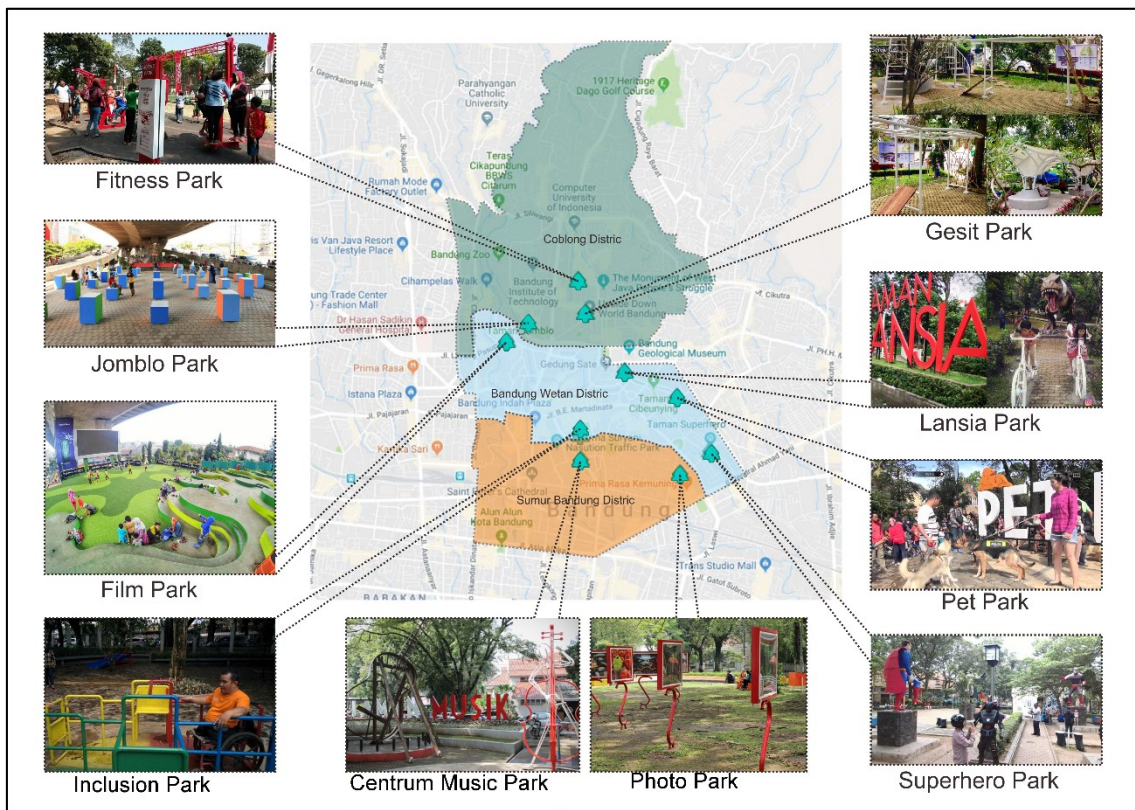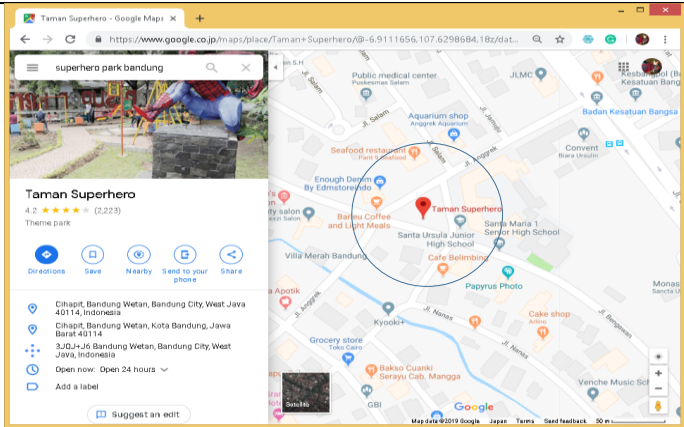
Figure 3.10 Location of Study Sites

Figure 3.10 shows the map location of each park. The case study in this study are Superhero Park, Centrum Music Park, Photo Park, Gesit Park (Agile Park), Fitness Park, Jomblo Park (Single Park), Film Park, Lansia Park (Elderly Park), Pet Park, and Inclusion Park.

3.1.5.1 Description of Superhero Park

Superhero Park is located in Jalan Bengawan, Bandung Wetan district, Bandung with an area of 2051 m^2 .The land use around the park is residential, commercial service, and education. There are several statues of famous superheroes who become idols of children. This park has superhero statues as a thematic icon. Visual appropriate design elements of the parks are a visual icon to represent the park's identity. This park was formerly called the Anggrek Park, then converted into a thematic park with a superhero theme. Based on the theme of the park as a theme park with a superhero theme, the park is then functioned as a playground and gather for children with age groups 3-16 years in Bandung in general. Garden designs and facilities available in a superhero park, in general, it represents the theme of the park as a brand where this park gives performances in the form of space experience through the superhero theme that is carried and channeled with an emphasis on garden design and facilities ranging from seating, sculpture, photo displays to signage as a confirmation of the theme of this park.

Table 3.7 Profile of Superhero Park

Area	2051 m^2
Revitalized (year)	2015
Location	
	Jl. Bengawan, Cihapit, Bandung Wetan
Facilities	Superhero statues, playground ,lighting, seat, free Wi-Fi, toilet, and parking area
Utilization	Public space for socializing and children's playground
Operational hours	Open every day, 24 hours

Source: Park and Cemetery Office Bandung City, 2017

3.1.5.2 Description of Centrum Music Park

Centrum Music Park is located at Jalan Sumbawa. The goal of Centrum Music Park is to accommodate the residents, especially the youth to practice or perform their hobbies of music, art, and sport. Total area is 2.100,75 m^2, facilities in this park are free Wi-Fi, small stage, basketball and futsal courts. The Centrum Music Park was inaugurated on March 1, 2014. The Centrum Music Park is intended for those who love music, especially the bands or music community. That place can be a place for bands who want to perform and can be used for free. The requirement is quite easy if you want to perform or hold a music event there, just coordinate and apply for licenses on Discamtam. That is to avoid a clash of schedules for those who want to use the Centrum Music Park. Not only to perform, but the park can also be a fun hangout for anyone. Lush trees and gardens arranged nicely will make visitors feel at home for long hanging out there.

Table 3.8 Profile of Centrum Music Park

Area	2100.75 m^2
Revitalized (year)	2014
Location	Jl. Sumbawa No.32, Merdeka
Facilities	Stage, basketball court, lighting, seat, free Wi-Fi, and parking area
Utilization	Public space for socializing and hold a free music event
Operational hours	Open every day, 24 hours

Source: Park and Cemetery Office Bandung City, 2017

3.1.5.3 Description of Photo Park

Photo Park is intended to accommodate the photography lovers. In this park, there are several works of photography. The park is located at Jalan Kemuning. Total area is 3.610 m^2, in this park there are facilities such as free Wi-Fi, parking area. This park carrying the theme of photography, the park is able to accommodate its thematic activities, namely by being equipped with thematic facilities such as photos, photo frames. As a gathering place community of photographers, parks this is able to meet the needs of the existing community which is used as a place to present a photo exhibition. Photo Park has monument C as the thematic icon.

Table 3.9 Profile of Photo Park

Area	3610 m^2
Revitalized (year)	2013
Location	 Jalan Kemuning No.4, Sumur Bandung
Facilities	Library, lighting, frame photo, seat, free Wi-Fi, toilet, trash can, and parking area
Utilization	Public space for socializing, children's playground, photo booth, photographer hangout, and photo exhibition place
Operational hours	Open every day, 24 hours
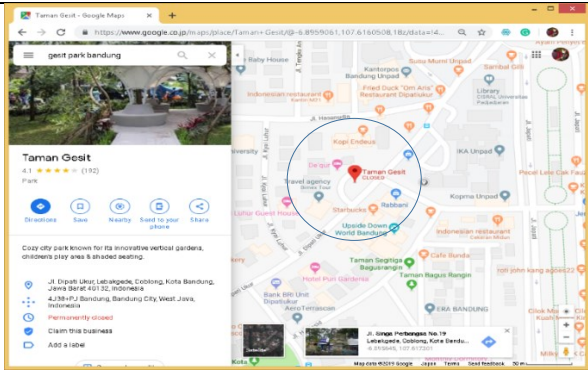
Source: Park and Cemetery Office Bandung City, 2017

Initially, this park was named Cempaka Park, but after being inaugurated the name changed to Photo Park. The opening of the Photo Park was carried out with the signing of the Wall of Fame by all communities and photography networks present. A triangular garden in the leafy area of the center of the Flower City revitalized by Bank Danamon in a CSR program (Corporate Social Responsibility) for handling the environment of the City of Bandung. Photo Park has routine activities every two months. The activity is in the form of photoshoots from several communities. While the photographer is free to fill six alternating red frames back at this photo park. Every two months it is replaced with a different theme. Every Monday morning there is usually a free photo class held by Eyeseephoto. Eyeseephoto is a photo community that provides volunteering services photography teaching with various techniques every week.

3.1.5.4 Description of Gesit Park

The name of Gesit Park or Agile Park is taken from the tagline of one of the formula milk brands, namely "More Nimble Motion". Facilities inside the park can support visitors to move more actively so that they support a healthy lifestyle. Parks not only function as play areas or places to relax. The park can also be a place to exercise so that the body stays healthy and fit. Total area is 755 m², in this park there are tree deck, various sports games. Parks not only function as play areas or places to relax. The park can also be a place to exercise so that the body stays healthy and fit. Gesit Park is designed with green and active concepts. The concept of green is poured in a green garden area.

Table 3.10 Profile of Gesit Park

Area	755 m²
Revitalized (year)	2015
Location	Jl. Dipatiukur, Lebakgede, Coblong
Facilities	Tree deck,vehicle for sports games (monkey bar, incline, spider web), lighting, seat, free Wi-Fi,toilet, trash can, parking area
Utilization	Public space for socializing and place to practice body fitness
Operational hours	Open every day, 24 hours

Source: Park and Cemetery Office Bandung City, 2017

3.1.5.5 Description of Fitness Park

Fitness Park is one of the thematic parks built by the Bandung City government to revitalize the park and provide sports facilities to the public. This park is located on Jalan Teuku Umar-Imam Bonjol. In accordance with the theme, this Fitness Park is specifically designed for outdoor exercise. Total area is 4.073 m². This park are equipped jogging track, therapy stone, mini soccer, fitness equipment,

parking area. Public spaces for socializing, practicing body fitness. Fitness Park has tools outdoors fitness as a thematic icon.

Table 3.11 Profile of Fitness Park

Area	4073 m^2
Revitalized(year)	2014
Location	Jl. Teuku Umar, Lebakgede, Coblong
Facilities	Fitness outdoor, jogging track, therapy stone, mini soccer field, lighting, seat, free Wi-Fi, toilet, and trash can
Utilization	Public space for socializing and place to practice body fitness
Operational hours	Open every day, 24 hours
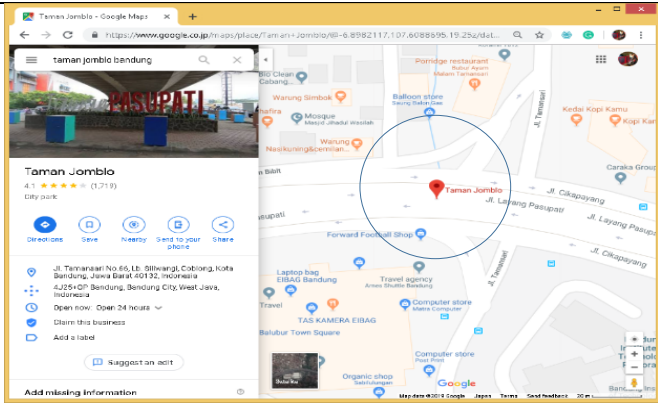
Source: Park and Cemetery Office Bandung City, 2017

The availability of fitness equipment makes it an attraction for visitors to do sports activities in this park. The land cover in this park is dominated by a grass block that has a run-off coefficient of 0.60 land area, while the other fields are able to absorb water. As a park that is used to train body fitness, this park is sufficient to fulfill its thematic functions with existing facilities. This park does not have the availability of space for economic activities due to its location directly opposite to public roads.

3.1.5.6 Description of Jomblo Park

Pasupati Park, better known as Jomblo Park, is located under the Pasupati Bridge. In legal definitions for interpersonal status, a single person or jomblo (in Indonesian terms) is someone who is not in a relationship or is "unmarried". The term "Taman Jomblo "is represented by the presence of a seat in that park that is shaped like a colorful cube with a small size that only fits one person. There are some Bandung skateboard communities that utilize this facility.

Table 3.12 Profile of Jomblo Park

Area	1539 m^2
Revitalized (year)	2014
Location	 Jl. Taman Sari No.66, Lb. Siliwangi, Coblong
Facilities	Single cube seats, skatepark, lighting, free Wi-Fi, toilet, and trash can
Utilization	Public space for socializing and palce for skateboard community
Operational hours	Open every day, 24 hours
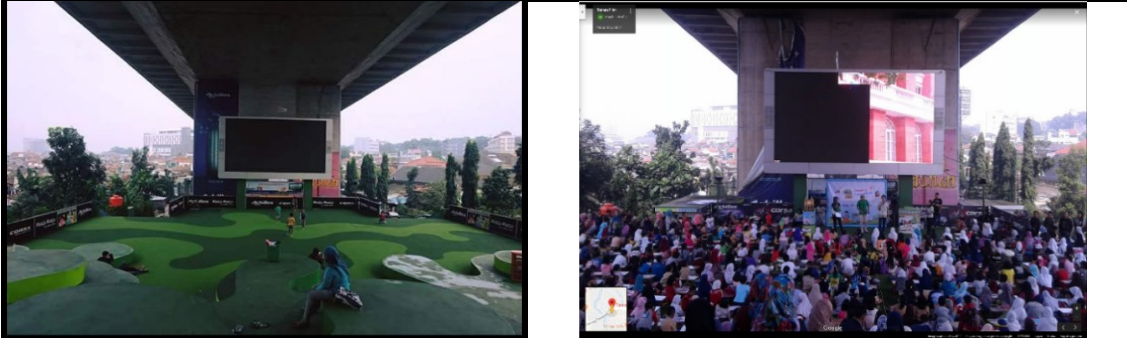
Source: Park and Cemetery Office Bandung City, 2017

This park is used as a public space for socializing and public spaces to distribute skateboard hobbies because, in this park, the skate park is also available. The land cover in this park is dominated by paving blocks which have a high land run-off coefficient of 0.50-0.70. There is no availability of trees that grow in this park. There are economic activities in this park.

3.1.5.7 Description of Film Park

This park is a place of appreciation for Indonesian films. Residents can watch movies from the 4 × 8 m Videotron screen with an electrical power of up to 33,000 watts. In accordance with the theme, this park was specifically designed for people to watch films produced by filmmakers from Bandung and also the community. Besides being used for watching, this park can also be an alternative as a gathering place for families.

Table 3.13 Profile of Film Park

Area	1100 m^2
Revitalized (year)	2014
Location	Jl. Layang Pasupati, Tamansari, Bandung Wetan
Facilities	Videotron 4x8 meter, seating 7 levels, lighting, synthetic grass, free Wi-Fi, toilet, and trach can
Utilization	Public space for socializing and presenting film shows
Operational hours	Open every day, 24 hours
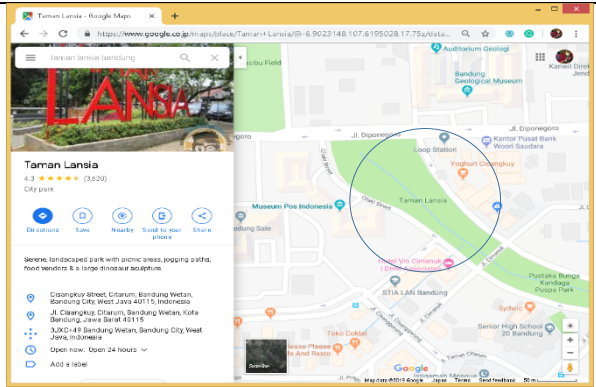
Source: Park and Cemetery Office Bandung City, 2017

Film Park is managed by the Bandung Film Community and Bandung City Cemetery and Gardening Service. Various types of films are screened every day, both local films such as Indie Bandung films, national films, or international films. The design of the seating in this park takes inspiration from the shape of the rice fields. Film Park can be enjoyed by all residents of Bandung without charge, but with the condition that they do not smoke because the carpet is flammable and does not litter. Because the irregularities of this parkland do not have shade trees.

3.1.5.8 Description of Lansia Park

Lansia is an abbreviation of Lanjut Usia or elderly. Lansia Park is a park for the elderly who want to refresh themselves or exercise. Despite its name, the park is visited by individuals of all ages from Bandung or from outside the city of Bandung. Lansia Park has an area of 16257 m2. This park is located on Cisangkuy road and was inaugurated on December 31, 2014. The land cover in this park is dominated by green land which has a low run-off coefficient of 0.05-0.15 land cover, so it can absorb water. Lansia Park provides the value of beauty in enhancing the beauty of the city by providing artificial retention lakes. There is economic activity in the park.

Table 3.14 Profile of Lansia Park
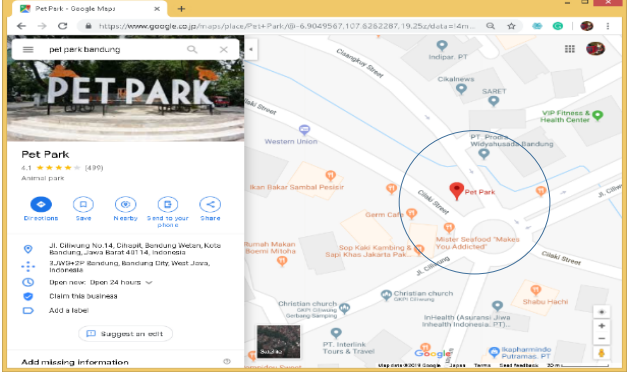
Area	16257 m^2
Revitalized (year)	2014
Location	 Jl. Cisangkuy, Bandung Wetan
Facilities	Retentio lake, library, jogging track, lighting, seat, free Wi-Fi, toilet, and trash can
Utilization	Public space for socializing, place to exercise, water concervation and flood conntrol
Operational hours	Open every day, 24 hours

Source: Park and Cemetery Office Bandung City, 2017

3.1.5.9 Description of Pet Park

Animal Park provides a playground for animal lovers and their pets. This park was indeed prepared for the community and animal lovers. This park is located on Jalan Cilaki. This park is an elongated urban forest which is then modified into a park. To support the organization of this thematic park there are several facilities provided in the park. The achievement of thematic activities in this park is very good because it has been used according to the concept of the park. With the existence of special animal facilities, it makes the community of animal lovers happy to invite their pets to play in this park. This park does not have space for economic activities due to its location specifically for pet's playground.

Table 3.15 Profile of Pet Park

Area	6085 m^2
Revitalized (year)	2016
	 Jl. Ciliwung No.14, Cihapi
Facilities	Animal dexterity tools, animal cage, jogging track, lighting, seat, free Wi-Fi, toilet, animal toilet and trash can
Utilization	Public space for socializing, animal's playground, and sports facilities.
Operational hours	Open every day, 24 hours

Source: Park and Cemetery Office Bandung City, 2017

3.1.5.10 Description of Inclusion Park

Inclusion Park was developed for disabled people. Inclusion Park is a public facility that was built as part of the effort to reduce discrimination in the city of Bandung. This park is designed to be as friendly as possible for disabled individuals to move and socialize, and it has become a place of healing therapy. To understand the needs of the disabled, the Bandung City Government through the Parks and Cemetery Service asking for the opinion of the disability to design this park. This is very important because you have to be able to be a comfortable and safe place for people with disabilities. Inclusion Park is not only a special park for disabled people city of Bandung to be able to carry the name of the city without discrimination. As well as like other playgrounds. Inclusion Park provided swings, mini carousels and others specifically designed to be wheelchair accessible. Inclusion Park equipped with special guiding blocks or tiles as a guide for the blind. As other parks, Inclusion Park is equipped with free Wi-Fi access areas.

Table 3.16 Profile of Inclusion Park

Area	2111 m^2
Revitalized (year)	2016
Location	 Jln. Aceh-Jln Saparua
Facilities	Giding block, playground for disabilities, seat, free Wi-Fi, trash can.
Utilization	Public space for socializing and playground for people with disabilities
Operational hours	Open every day, 24 hours

Source: Park and Cemetery Office Bandung City, 2017

3.2 Data Collection Method

Social networks, in one form or another, have existed since people first began to interact. Today's Internet-everywhere world, online social networks have become entirely ubiquitous. A social network is defined as a social structure of individuals, who are related (directly or indirectly to each other) based on a common relation of interest, e.g. friendship, trust, etc. Social network analysis is the study of social networks to understand their structure and behavior. Social network analysis has gained prominence due to its use in different applications - from product marketing (e.g. viral marketing) to search engines and organizational dynamics (e.g. management) [14]. People are addicted to social network features, updating their profile page and collaborating virtually with other members have become daily routines. Social networks contain massive collection of data [15]. Large collection of data is available on Social networks. There are confidential information plus general details. General details comprise of members' interests, fan pages, birthdays, relationship status, networks etc. Most of the members of these networks display this information on their profiles.

3.2.1 Google Maps User Online Reviews

The extracted data from Google Maps were used to find the parks' locations. Figure 3.11 shows the how to find the Google Maps User reviews. Since 2015, Google has seen the most dramatic increase in the number of reviews compared to other review platforms. Yelp, Facebook, and TripAdvisor have all seen increases in reviews, so this is a positive story for all of them, but Google is growing the fastest by far [17].
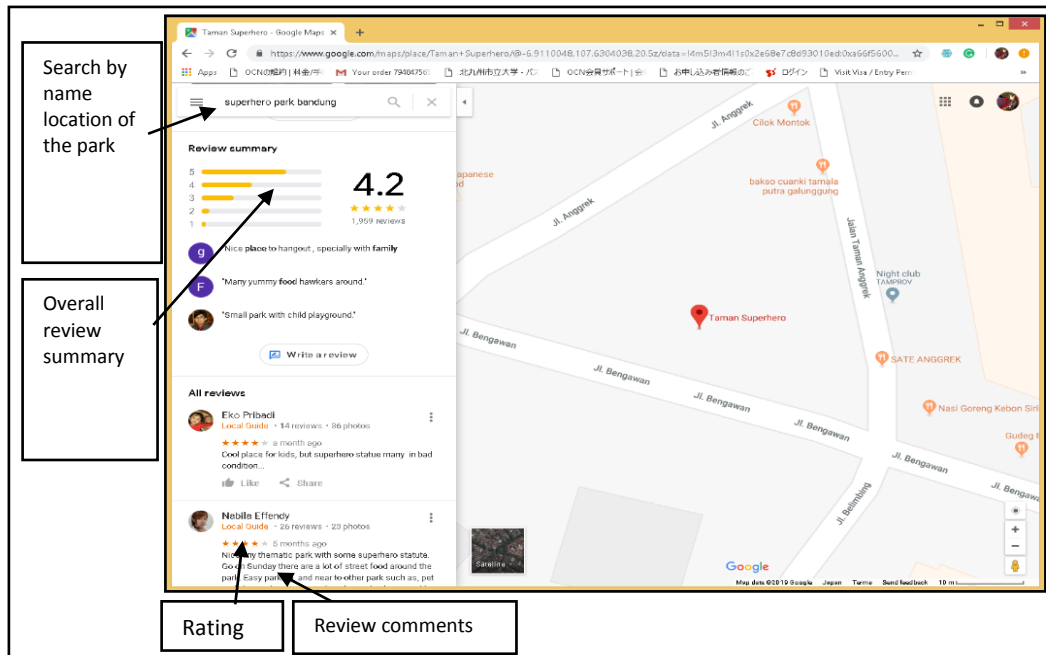
Figure 3.11An Example of Google Maps User Reviews

According to Ref [18], there are a number of benefits Google Reviews.

1. More Google reviews increase trust and credibility: This might sound strange, but a vast majority of people (84% to be exact) trust online reviews as much as recommendations from family and friends as long as they meet certain criteria like authenticity, is in the right industry, or you have multiple reviews on the same site. Because Google is one of the most used, and most trusted search engines, people are willing to give trust and credibility to Google reviews more than reviews from less trustworthy sources. This means understanding how to get Google reviews is more important than ever.

2. Google reviews influence purchase decisions: Online Google reviews can be just what a consumer needs to push them from consideration to purchase. A lot of times when consumers are reading Google reviews they are looking for confirmation that they are making the right decision. And positive online reviews can do just that, but the opposite can also be true. If business has a low star rating or a lot of recent negative Google reviews, customers could be pushed to the competition. Knowing how to get

Google reviews and also how to understand what reviews mean is a big deal. A recent survey said that 13% of consumers wouldn't even consider purchasing from a business with a 1- to 2-star rating.

3. Google reviews improve local SEO: One of the biggest benefits that online reviews bring to your business is a boost in local search ranking. This is important because if customers can't even find your business when they are looking, how can they possibly make a purchase from you. Knowing how to get Google reviews helps with rankings and revenue. The impact of online reviews Google Maps listing helps business stand out from the crowd. More importantly, it means business is highlighting the fact that you offer a great service, great product and that customers love you.

3.2.2 Data Extraction

We collected data from online reviews by Google Maps based on locations of the parks. We used web crawler to extract all data from Google Maps User reviews. A web crawler (also known as a search engine spider, search bot, and robot) is a program which is used by search engine to find what is new on internet (website) [19]. This process called crawling. Web crawler makes beginning by crawling the pages of websites. Then it indexed the words and contents found on that website.
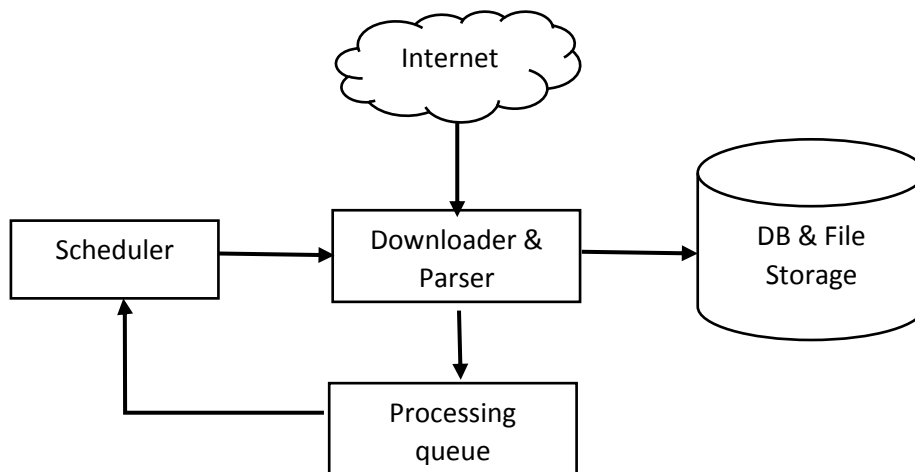
Figure 3.12 Standard Architecture for a Web Crawler

Figure 3.12 shows how a web crawler operates. First it browses through net and collect links and these links will be pending until the scheduler calls for it. Each link will be loaded and their content will be parsed. Finally they will store the required information to the database.
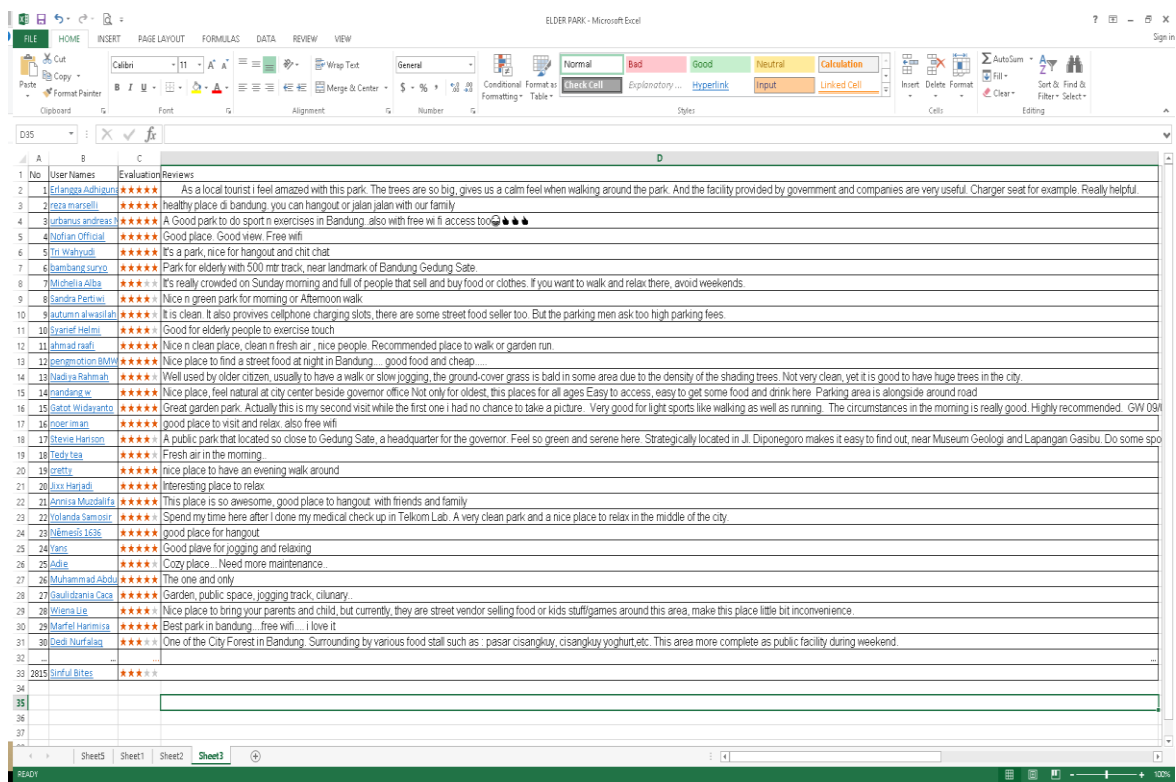
Figure 3.13 Example of Data Extraction

Figure 3.13 shows data extraction from Google Maps user reviews collected by a web crawler. All extracted data is stored in an excel file with user data, evaluation in the form of star scores and opinion texts from reviewers. Table 3.17 shows data collected of online reviews. We used only reviews data with reviews text opinion and evaluation (rating with star score).

Table 3.17 Distribution of Total Online Reviews Data

Name of Park	Total reviewers	Total reviewers with text opinion and evaluation (rating score)
Superhero Park	1409	755
Centrum Music Park	906	390
Photo Park	781	391
Gesit Park	149	78
Fitness Park	409	185
Jomblo Park	1234	631
Film Park	1319	710
Lansia Park	2815	1411
Pet Park	414	202
Inclusion Park	46	30
Total	9482	4783

53

3.3 Questionnaire Data Collection

The distribution of the questionnaire in 10 Bandung thematic parks was held in March 2019. The target of the survey was to identify and to confirm finding the online reviews data on Google Maps user reviews (e.g., gender, age, occupation, opinion, etc.). In this part, text analysis is employed to identify visitors' opinions. From this analysis, visitors' perceptions are summarized and conformed to the online reviews data.

The population of the research subjects were the people in the city of Bandung, which is based on the Bandung Strategic Data Publication 2015, the population of Bandung is 2.497.938 inhabitants. This kind of population is classified in the category of finite population, so to determine the number of samples that can represent the population can be used Slovin formula quoted [20].

$$n = \frac{N}{1 * N(e)^2}$$

n = Number of Sample

N = Total population

E = Error tolerance

Based on the formula above, the number of sample used in this study with error tolerance = 10% is as follows:

$$n = \frac{2.497.938}{1 + 2.497.938 \ (0.1)^2} = \frac{2.497.938}{24.980,38} = 99.996 \ \approx 100 \ respondents$$

The population object of this study is all the thematic parks in Bandung, which amounted to 10 parks: Superhero Park, Centrum Music Park, Photo Park, Gesit Park (Agile Park), Fitness Park, Jomblo Park (Single Park), Film Park, Lansia Park (Elderly Park), Pet Park, and Inclusion Park.

3.4 Text Mining

The next process is analysis of opinion from reviewers. Text opinion will analysis using text mining. Text Mining is also known as Text Analytics. It is the process of understanding information from a set of texts [21]. Text Mining is designed to help the business find out valuable knowledge from text based contents. These contents can be in the form of word document, email or postings on social network.

Text Mining is the use of automated methods for understanding the knowledge available in the text documents. Text Mining can also be used to make the computer understand structured or unstructured data. Qualitative data or unstructured data are data that cannot be measured in terms of numbers. These data usually contain information like color, texture and text. Quantitative data or structured data are data that can be measured easily.

Text mining is a multidisciplinary field, concerning retrieval of information, analysis of text, extraction of information, categorization, clustering, visualization, mining of data, and machine learning.
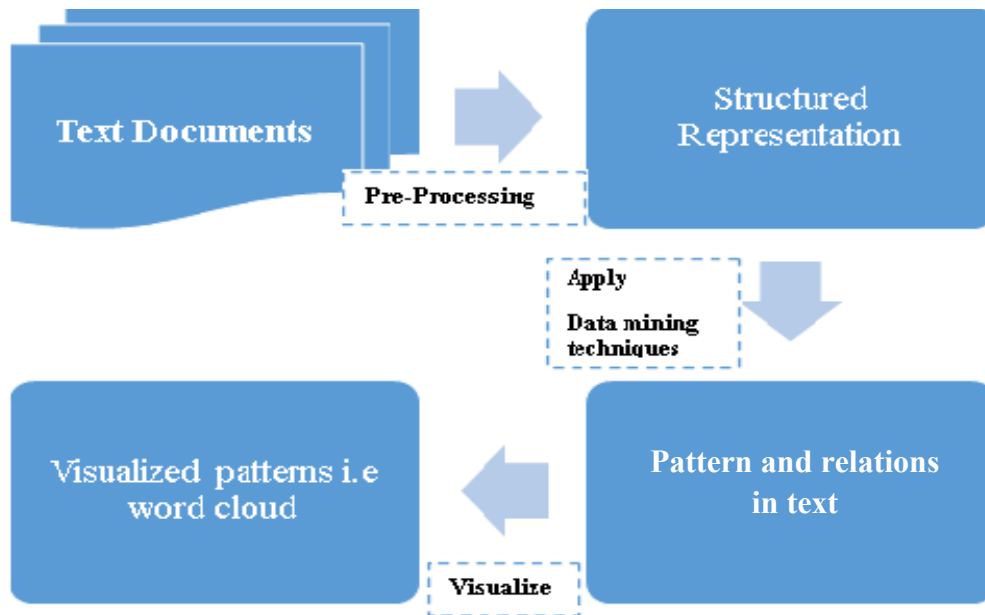
Figure 3.14 Text Mining Process

Figure 3.14 shows summarizes the text mining process. According to Ref [22], text mining process:

1. A set of un-structured text documents is collected.
2. The pre-processing for the documents is performed to remove noise and commonly used words, stop words, stemming.
3. This process produces a structured representation of the documents known as Term document matrix, in which, every column represents a document and every row represents a term occurrence throughout the document.
4. The final step is applying data mining techniques such as clustering, classification, association rules to discover term associations and patterns in the text
5. Finally, visualizing these patterns using tools such as word-cloud or tag-cloud.

3.5 Sentiment Analysis

Sentiment analysis can be referred to as the discovery and recognition of positive or negative opinions of people's opinions about various matters of concern. The opinions expressed by users of social networks are often convincing and these indicators can be used to form the basis of choices and decisions made by people about the protection of certain products and services or the support of political candidates during elections [24, 25].

Sentiment Analysis task is considered a sentiment classification problem. The first step in the sentiment classification problem is to extract and select text features. Some of the current features are [26]: Terms presence and frequency: These features are individual words or word n-grams and their frequency counts. It either gives the words binary weighting (zero if the word appears, or one if otherwise) or uses term frequency weights to indicate the relative importance of features [27].Parts of speech (POS): finding adjectives, as they are important indicators of opinions. Opinion words and phrases: these are words commonly used to express opinions including good or bad, like or hate. On the other hand, some phrases express opinions without using opinion words. For example: cost me an arm and a leg. Negations: the appearance of negative words May change this approach is best suitable for the text classification.

The purpose of the sentiment analysis on social networks is to recognize potential shifts in society because it involves the attitudes, observations, and expectations of stakeholders or the community. This recognition allows the related entity to take action quickly by making the necessary decisions. It is important to translate sentiments expressed to useful knowledge through mining and analysis. After providing an overview of sentiment analysis on social networks, an overview of some of the data mining tools used for sentiment analysis on social networks is discussed in the following survey sections

3.5.1 Feature Selection Methods

The feature selection method can be divided into lexicon-based methods that require human explanations, and statistical methods which are automatic methods that are more often used. Then they bootstrap this set by detecting synonyms or online resources to get a bigger lexicon. This proved to have many difficulties as reported by Ref [28]. The statistical approach, on the other hand, is full-automatic which retains the sequence of words in the document. BOW is used more often because of its simplicity for the classification process. The most common feature selection step is the removal of stop-words and stemming (returning the word to its stem or root i.e. flies - fly) [26].

3.5.2 Sentiment Classification Techniques

      Sentiment classification techniques can be roughly divided into machine learning approaches, lexicon based approaches and hybrid approaches [29]. The Machine Learning Approach (ML) applies the well-known ML algorithm and uses linguistic features. The Lexicon-based approach to the lexicon of sentiments, a collection of sentiment terms known and compiled before. This is divided into a dictionary-based approach and a corpus-based approach that uses statistical or semantic methods to find sentiment polarity. The heating approach combines both approaches and is very common with sentiments that play a key role in most methods. The most popular SC approaches and algorithms are illustrated in Figure. 3.15.
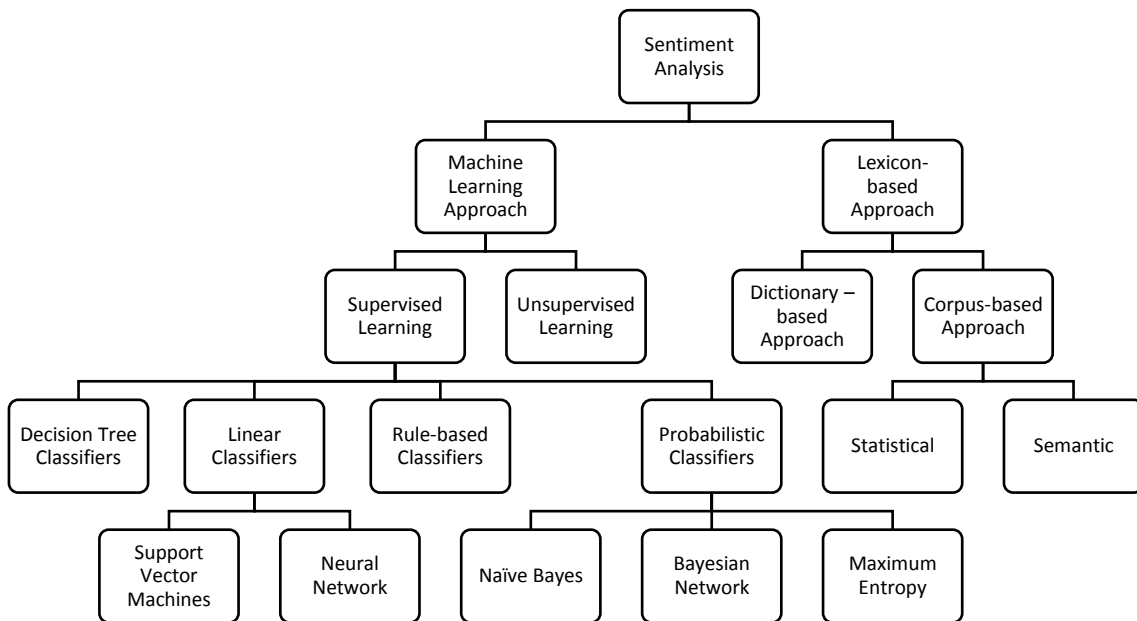
Figure 3.15 Sentiment Classification Techniques

      Text classification methods using the ML approach can be much divided into guided and unsupervised learning methods. The supervised method uses a large number of labeled training documents. Unattended methods are used when it is difficult to find this labeled training document. The lexicon-based approach depends on finding the opinion lexicon used to analyze the text. There are two methods in this approach. A dictionary-based approach that relies on finding seed words of opinion, and then searches for dictionaries of their synonyms and antonyms. The corpus-based approach starts with an initial list of opinion words and then finds other opinion words in the large corpus to help in finding opinion words with a specific context orientation. This can be done using statistical or semantic methods.

The existing work on sentiment analysis can be classified from different points of views: technique used, view of the text, level of detail of text analysis, rating level, etc. From a technical point of view, we identified machine learning, lexicon-based, statistical and rule-based approaches.

1. The machine learning method uses several learning algorithms to determine the sentiment by training on a known dataset.

2. The lexicon-based approach involves calculating sentiment polarity for a review using the semantic orientation of words or sentences in the review. The "semantic orientation" is a measure of subjectivity and opinion in text.

3. The rule-based approach looks for opinion words in a text and then classifies it based on the number of positive and negative words. It considers different rules for classification such as dictionary polarity, negation words, booster words, idioms, emoticons, mixed opinions etc.

4. Statistical models represent each review as a mixture of latent aspects and ratings. It is assumed that aspects and their ratings can be represented by multinomial distributions and try to cluster head terms into aspects and sentiments into ratings.
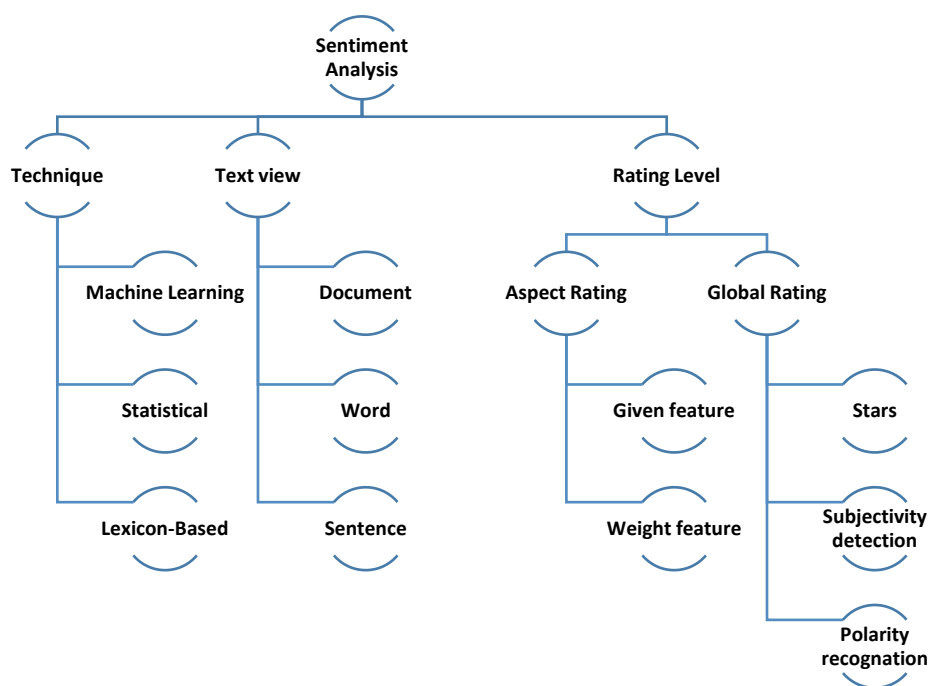
Figure 3.16 Classification of Existing Solutions

Another classification is oriented more on the structure of the text: document level, sentence level or word/feature level classification. Document level classification aims to find a sentiment polarity for the whole review, whereas sentence level or word-level classification can express a sentiment polarity for each sentence of a review and even for each word. Our study shows that most of the methods tend to focus on a document-level classification.

3.5.3 Naïve Bayes Classification

Naïve Bayes is an innovative process for statistical categorization. Even though assume that neural networks are less difficult to use than this, so often unsatisfactory results obtained with it. As far as task categories worry usually involves education and testing of data sets consisting of a few note times. Each example in the training set carries one goal value and several attributes. Bayes' naive intention was to provide a version predicts the target value of the best time record in the initial examination attribute attributes at Naïve Bayes are examples of supervised learning. Considered labels help imply whether the device appears in the right way or not. This information points to the desired response, validating accuracy a device, or used to help to learn gadgets act effectively. A step in naive Bayes the category involves identification that can be specifically linked to a known class [30]. This is called a choice of features or characteristics extraction. Choice of functions and naive Bayes categorization together have even use if the prediction of an unknown sample is not important.

This approach is best suitable for the text classification. For the review document 'b' the classifier will assign the class label as a $*= argmaxc$ P (a|b).This probabilistic classifier is dependent on the Bayes theorem. The NB Classifier is more suited when the proportions of inputs are high. The Bayes rule used by the NB Classifier,

$$P(a|b) = \frac{P(a)P(a|b)}{P(b)}$$

Where P (a) and P (b) be the probabilities of the perceiving a and b and P (a|b) is the probability of perceiving event a given that event b is true and P (b|a) is vice-versa of P (a|b).

3.6 Sentiment Analysis Using Excel with Azure Machine Learning

Azure Sentiment Analysis model was created on Microsoft Azure. It was used to determine the text sentiment. This was done by building the Azure Machine Learning model, training it on how to detect the sentiment, and finally setting it as a predictive model to facilitate it to detect and identify sentiments as neutral, negative or positive [31]. We using sentiment analysis with Azure machine learning to analyze text opinion and evaluation of reviewers' assessment by the sentiment score.
How to detect sentiment with text analytics.

1. The sentiment analysis API evaluates text input and returns a sentiment score for each document, ranging from 0 (negative) to 1 (positive). This capability is useful for detecting positive and negative sentiment in social media, customer reviews, and discussion forums.
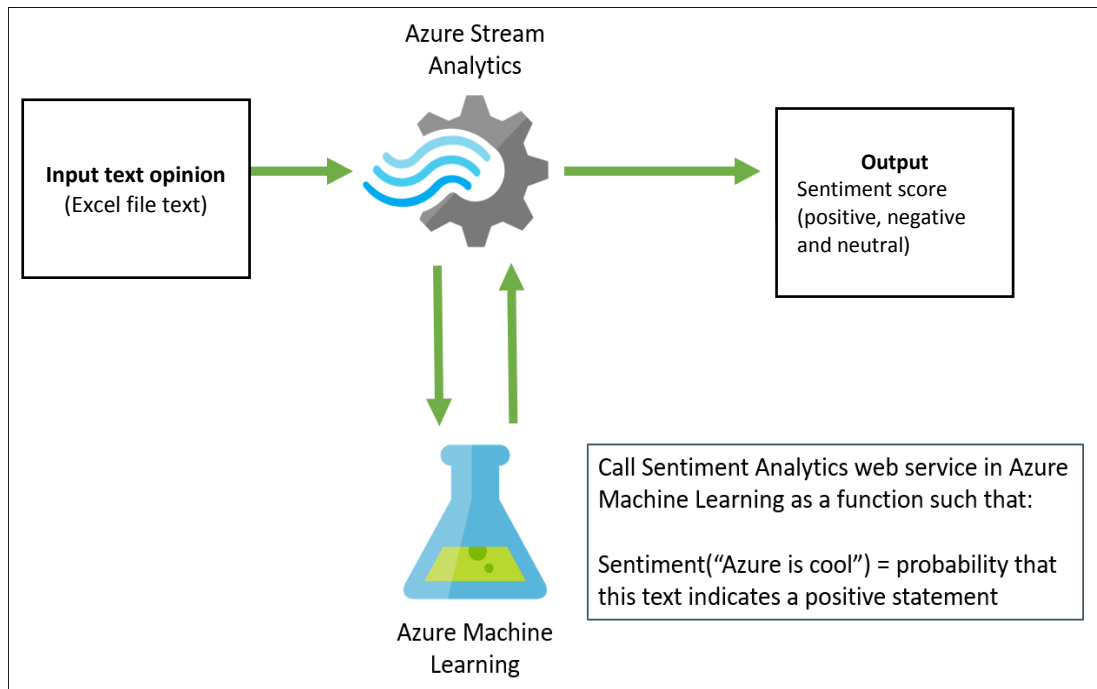
Figure 3.17 Sentiment Analysis Process using Microsoft Azure
Source:Https://docs.microsoft.com/en-us/azure/stream-analytics/stream-analytics-machine-learning-integration-tutorial (last accessed on 15 June 2019) with authors' modification

2. Machine learning algorithms. The API can be used to analyze unstructured text for tasks such as sentiment analysis, key phrase and entity extraction as well as language detection. No training data is needed to use this API; just bring your text data. This API uses advanced natural language processing techniques to deliver best in class predictions.

3. Text Analytics uses a machine learning classification algorithm to generate a sentiment score between 0 and 1. Scores closer to 1 indicate positive sentiment, while scores closer to 0 indicate negative sentiment. The model is pre-trained with an extensive body of text with sentiment associations. Currently, it is not possible to provide your own training data. The model uses a combination of techniques during text analysis, including text processing, part of speech analysis, word placement, and word associations.

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Chapter 4. Branding Reputation of Park by Online Reviewers' Perceptions Using Sentiment Analysis

4.1 Introduction

Online reviews for a wide variety of products and services are being created every day by customers to express their opinion about consumed goods and services. The volume of reviews for a given entity can often be prohibitive for a potential customer who wishes to read all relevant information, compare alternatives, and make an informed decision [1]. Reviews and ratings on the Internet are increasing their importance in the evaluation of products and services by potential customers. In certain sectors, it is even becoming a fundamental variable in the "purchase" decision. Internet users often evaluate products or services online. Opinion Mining and Sentiment Analysis are important for determining opinions on brands and services or understanding consumers' attitude. This chapter contains how to use data from the reviewers' opinion and expectation to be a tool to determine the perceptions of visitors. Branding of park uses sentiment analysis to evaluate, find and, measure visitor's opinion and attitudes towards their brand and services. Analysis sentiment on the social network provides excellent source data and will provide insight that can determine brand reputation.

4.2 Sentiment Analysis

Sentiment analysis, also called opinion mining, is the field of study that analyzes people's opinions, sentiments, evaluations, appraisals, attitudes, and emotions towards entities such as products, services, organizations, individuals, issues, events, topics, and their attributes. It represents a large problem space. There are also many names and slightly different tasks, e.g., sentiment analysis, opinion mining, opinion extraction, sentiment mining, subjectivity analysis, affect analysis, emotion analysis, review mining, etc. [2]. Opinions are central to almost all human activities because they are key influencers of our behaviors. Whenever we need to make a decision, we want to know others' opinions. In the real world, businesses and organizations always want to find consumer or public opinions about their products and services. Sentiment analysis can be defined as a process that automates mining of attitudes, opinions, views and emotions from text, speech, tweets and database sources through Natural Language Processing (NLP). Sentiment analysis involves classifying opinions in text into categories like "positive" or "negative" or "neutral". It's also referred as subjectivity analysis, opinion mining, and appraisal extraction. The words opinion, sentiment, view and belief are used interchangeably but there are differences between them [3].

The relevant reviews can be filtrated and followed by an assessment of whether the reviews are objective or subjective before identification opinion is positive, negative or neutral. The number of

words in each text reviews with positive meaning is then compared to the number of words with a negative meaning to give an overall sentiment score [4, 5].

4.3 Sentiment Analysis Process using Microsoft Excel with Azure Machine Learning

We are using Microsoft Excel connecting to Application Azure Machine Learning. Microsoft Azure Machine Learning encompasses cloud services that enable the creation, deployment, and management of applications by developers via a global network of data centers for Microsoft. This cloud computing model emphasizes the cloud platform's differentiating features namely flexibility, agility and scalability. Currently, Azure calculates the contribution score of the user based on social media metrics. This allows for the easy quantification of the value of users of Microsoft add to its cloud business on social media to enable it to provide differentiated services.

Azure Machine Learning also supports multiple Machine Learning algorithms related to regression, classification, and clustering [6]. Azure Machine Learning studio allows for the dragging and dropping of Modules and datasets (i.e., Machine Learning algorithms, feature selection, and pre-processing) and links them together. This experiment can be trained and transformed into a predictive experiment [7].

The framework shown in figure 4.1 is a typical sentiment analysis model that grants access to historical content and to various tools for searching, analyzing and reporting based on data.
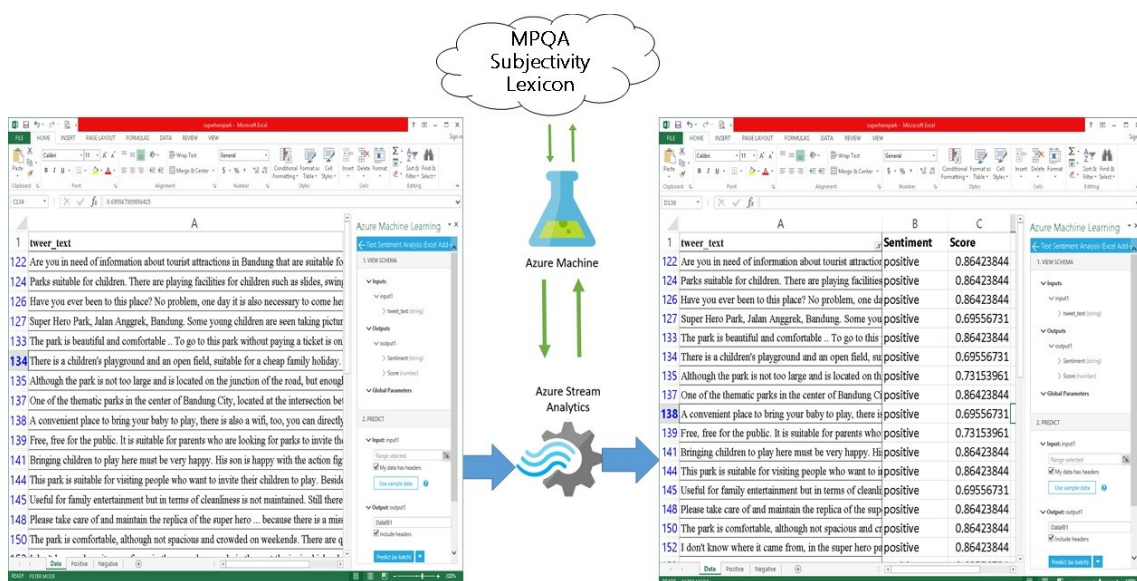
Figure 4.1 Sentiment Analysis Process with Azure Machine Learning

Sentiment analysis process:

1. File Excel extraction of text reviews add the Azure Machine Learning App.
2. Azure Machine Learning add-in uses MPQA (Multi Perspective Question Answering) subjectivity lexicon, is a list of subjectivity clues that is part of opinion finder. This generic dictionary includes

5. 097 negative and 2.533positive words. Each word is assigned a strong or weak polarity.

3. The sentiment analysis API evaluates text input and returns a sentiment score for each document, ranging from 0 (negative) to 1 (positive).

4. The Text Analytics API is a suite of text analytics web services built with best in class Microsoft machine learning algorithms.

5. Text Analytics uses a machine learning classification algorithm to generate a sentiment score between 0 and 1. Scores closer to 1 indicate positive sentiment, while scores closer to 0 indicate negative sentiment. The model is pre-trained with an extensive body of text with sentiment associations.

4.4 Brand Reputation Score

Brand reputation represents the attractiveness of the brand. Good responses from people could awake the desire for a product, create brand awareness, and encourage a positive attitude toward the product (brand reputation). There are several ways to measure brand reputation in social network. Net Reputation Score (NRS) is popular, but problematic method. Net Reputation Score is easy to calculate. It's the percentage of positive mentions minus the percentage of other mentions (neutral and negative). This means that the end result is always a value between +100 (a brand with all positive mentions) and -100 (a brand with no positive mentions) [8]

Net Reputation Score = [% positive mentions] – [% negative mentions + % neutral mentions]   (1)

The core problem is the influence of neutral mentions which always have the highest brand volume. Treating a neutral mention the same as a negative mention doesn't make sense. If we can't discern a negative mention from a neutral mention, the result is an imperfect proportion and a poor indicator of brand reputation.

The way to improve NRS is simple. Ignore neutral mentions. These have little impact on reputation, and removing from the equation fixes the math problem. The result is still a value between +100 and -100, but the range accurately represents brand status:

1. A revised NRS score of +100 represents a (rare, unicorn) brand with all positive mentions;

2. A revised NRS score of -100 represents an (uncommon, unpopular) brand with all negative mentions; and

3. A revised NRS score of 0 represents a (common) brand with equal volume of positive and negative mentions.

Scores slightly higher than zero and slightly lower than zero will be common. And, it's possible to benchmark brands over time, or against competitors, accurately using this revised NRS calculation:

Net Reputation Score = [% positive mentions] – [% negative mentions]   (2)

4.5 Analysis Data and Measuring Brand Reputation

In our opinion the first stage of a process of place branding is to analyze the perception of the city brand by different audiences, both internal and external. The perceptions of the audiences are a stronger determinant of positive or negative outcomes, and so measuring these perceptions in place of real characteristics seems to be more valuable and meaningful-even though place identity is unquestionably one key driver of place perception [9].

Implementation of sentiment classification with polarity recognition by positive, negative, and neutral text opinions, we found the sentiment score form the opinion.

This approach is best suitable for the text classification. For the review document 'b' the classifier will assign the class label as a $*= argmaxc$ P (a|b).This probabilistic classifier is dependent on the Bayes theorem. The NB Classifier is more suited when the proportions of inputs are high. The Bayes rule used by the NB Classifier,

$$P (a|b) = \frac{P (a)P (a|b)}{P (b)}$$

Where P (a) and P (b) be the probabilities of the perceiving a and b and P (a|b) is the probability of perceiving event a given that event b is true and P (b|a) is vice-versa of P (a|b).

For a document a and a class b using Bayesian theorem, P (b | a) = [p (a | b) * p (b)] / [p (a)] . The term p (a|b) is represented as Now representing the document a as a set of features (words or tokens) x1, x2, x3 … We can then re-write P (a | b) as: P(x1, x2, x3… xn | b). P (b) is defined as total probability of a class. Which gives the frequency of class b.

Reviews data from social network Google Maps user's reviews we calculated the sentiment score. Score represented reviews with sentiment positive, negative, and neutral. Machine learning classification algorithm to generate a sentiment score between 0 and 1. Scores closer to 1 indicate positive sentiment, while scores closer to 0 indicate negative sentiment.
The following are the sentiment analysis results from 10 thematic parks.

4.5.1 Brand Reputation of Superhero Park

Based on Superhero Park reviews data, we calculated the text opinion of users using the sentiment analysis to find out the score and predicate of opinion. The total of reviews is 1409 reviews, but we filtered, we used the data only reviews with text comment in the review. We selected 755 reviews to analyze the brand score reputation. Detail of data classification of the sentiment analysis process can be seen in Appendix 1 (Table A1.1 distribution of sentiment analysis online reviews of Superhero Park). From the table we can see the score of text reviews, R is review. R1 until R755 represented text reviews from user's opinion of the park. This is the first process to understand the sentiment of reviews which positive, negative, or neutral.

After the implementation of sentiment classification from 755 reviews, we got the values of sentiment distribution of Superhero Park reviews calculated as follows: 609 sentiment positive, 89 sentiment negative, and 57 sentiment neutral. From the result that used to calculate the brand reputation based on the distribution of sentiment with positive and negative. The next process is to calculate the brand reputation score with Net Reputation Score formula. Figure 4.2 shows the percentage distribution sentiment opinion of Superhero Park.
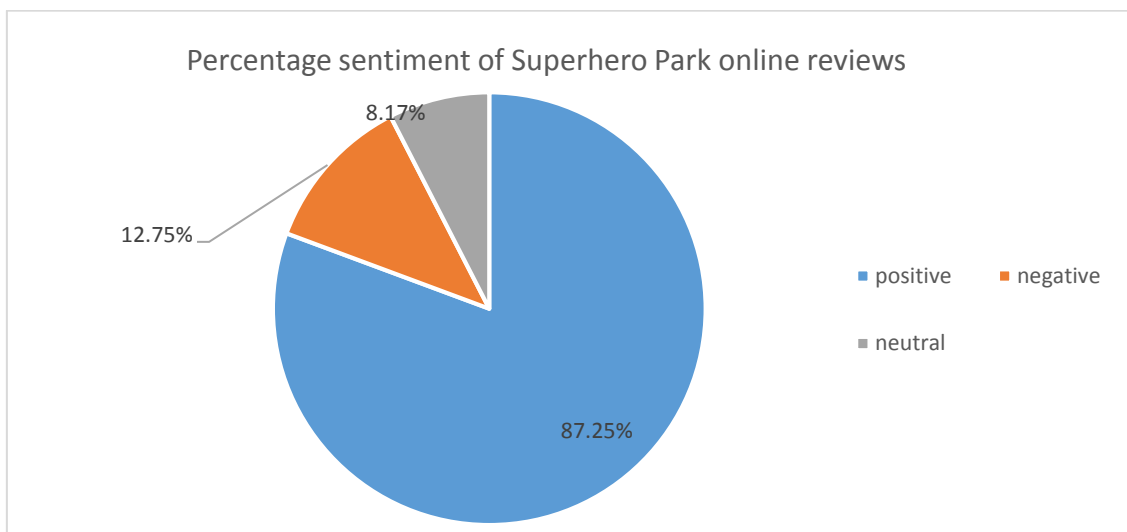
Figure 4.2 Percentage Distribution of Sentiment Superhero Park Reviews

Form figure 4.2 we can see that the percentage of sentiment positive is 87.25%, sentiment negative 12.75 %, and sentiment neutral is 8.17 %. By ignored the neutral mentions, the brand reputation score of Superhero Park is: Net Reputation Score: [87.25 % positive mentions – 12.75% negative mentions]. The brand reputation score is 74.50 %, represents a brand with all positive mentions or good reputation. Positive mentions more than negative mentions from user's reviews opinion of the park.

4.5.2 Brand Reputation of Centrum Music Park

Based on Centrum Music Park reviews data, we calculated the text opinion of users using the sentiment analysis to find out the score and predicate of opinion. The total of reviews is 906 reviews, but we filtered, we used the data only reviews with text comment in the review. We selected 390 reviews to analyze the brand score reputation. Detail of data classification of the sentiment analysis process can be seen in Appendix 1 (Table A1.2 distribution of sentiment analysis of user's reviews Centrum Music Park). From the table we can see the score of text reviews, R is review. R1 until R390 represented text reviews from user's opinion of the park. This is the process to understand the sentiment of reviews which positive, negative, or neutral.

Implementation of sentiment classification from 390 reviews, we got the values of sentiment distribution of Centrum Music Park reviews calculated as follows: 339 sentiment positive mentions, 31 sentiment negative mentions, and 20 sentiment neutral mentions. From the result that used to calculate the brand reputation based on the distribution of sentiment with positive and negative. The next process is to calculate the brand reputation score with Net Reputation Score formula. Figure 4.3 shows the percentage distribution sentiment opinion of Centrum Music Park.
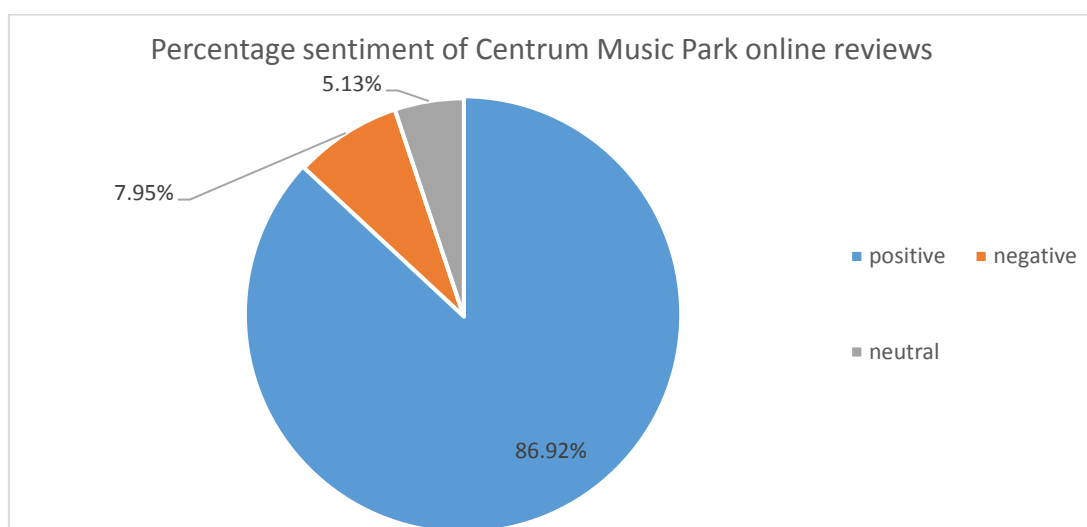
Figure 4.3 Percentage Distribution of Sentiment Centrum Music Park Reviews

Form figure 4.3 we can see in the blue color area the percentage of sentiment positive mentions is 86.92%, red color area the percentage sentiment negative mentions is 7.95 %, and green color area is percentage sentiment neutral mentions with 5.13 %. By ignored the neutral mentions, the brand reputation score of Centrum Music Park is: Net Reputation Score: [86.92 % positive mentions – 7.95% negative mentions]. The brand reputation score is 78.97 %, represents a brand with all positive mentions or good reputation. Positive mentions more than negative mentions from user's reviews opinion of the park.

4.5.3 Brand Reputation of Photo Park

Based on Photo Park reviews data, we calculated the text opinion of users using the sentiment analysis to find out the score and predicate of opinion. The total of reviews is 781 reviews, but we filtered, we used the data only reviews with text comment in the review. We selected 391 reviews to analyze the brand score reputation. Detail of data classification of the sentiment analysis process can be seen in Appendix 1 (TableA1.3 distribution of sentiment analysis of user's reviews Photo Park). From the table we can see the score of text reviews, R is review. R1 until R391 represented text reviews from user's opinion of the park. This is the process to understand the sentiment of reviews which positive, negative, or neutral.

Implementation of sentiment classification from 391 reviews, we got the values of sentiment distribution of Photo park reviews calculated as follows: 327 sentiment positive mentions, 40 sentiment negative mentions, and 24 sentiment neutral mentions. From the result that used to calculate the brand reputation based on the distribution of sentiment with positive and negative. The next process is to calculate the brand reputation score with Net Reputation Score formula. Figure 4.4 shows the percentage distribution sentiment opinion of Photo Park.
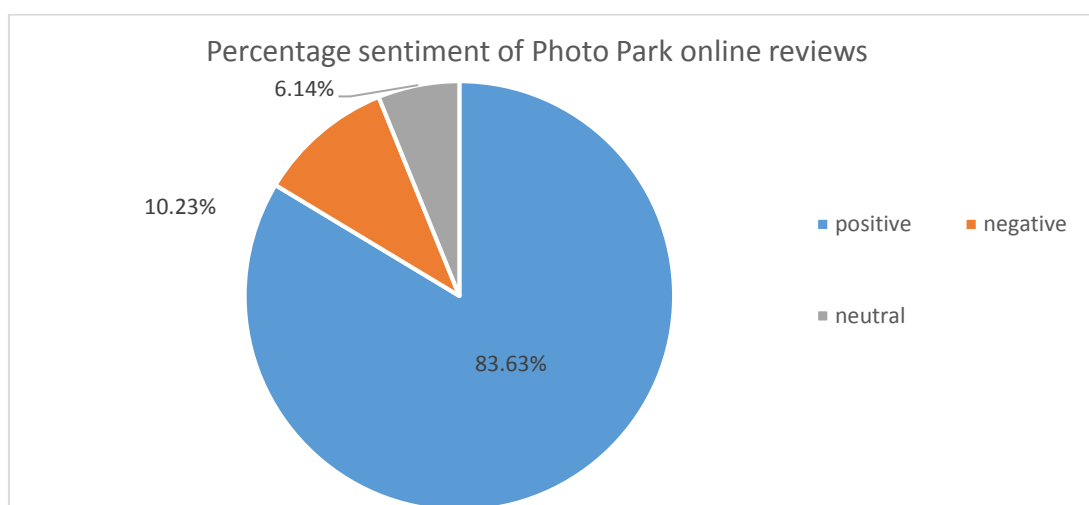
Figure 4.4 Percentage Distribution of Sentiment Photo Park Reviews

Form figure 4.4 we can see in the blue color area the percentage of sentiment positive mentions is 83.63%, a red color area the percentage sentiment negative mentions is 10.23 %, and the green color area is percentage sentiment neutral mentions with 6.14 %. By ignored the neutral mentions, the brand reputation score of Photo Park is, Net Reputation Score: [83.63 % positive mentions – 10.23 % negative mentions]. The brand reputation score is 73.40 %, represents a brand with all positive mentions or good reputation. Positive mentions more than negative mentions from user's reviews opinion of the park.

4.5.4 Brand Reputation of Gesit Park

Based on Gesit Park reviews data, we calculated the text opinion of users using the sentiment analysis to find out the score and predicate of opinion. The total of reviews is 149 reviews, but we filtered, we used the data only reviews with text comment in the review. We selected 78 reviews to analyze the brand score reputation. Detail of data classification of the sentiment analysis process can be seen in Appendix 1 (Table A1.4 distribution of sentiment analysis of user's reviews Gesit Park). From the table we can see the score of text reviews, R is review. R1 until R78 represented text reviews from user's opinion of the park. This is the process to understand the sentiment of reviews which positive, negative, or neutral.

Implementation of sentiment classification from 78 reviews, we got the values of sentiment distribution of Gesit Park reviews calculated as follows: 64 sentiment positive mentions, 10 sentiment negative mentions, and 4 sentiment neutral mentions. From the result that used to calculate the brand reputation based on the distribution of sentiment with positive and negative. The next process is to calculate the brand reputation score with Net Reputation Score formula. Figure 4.5 shows the percentage distribution sentiment opinion of Gesit Park.
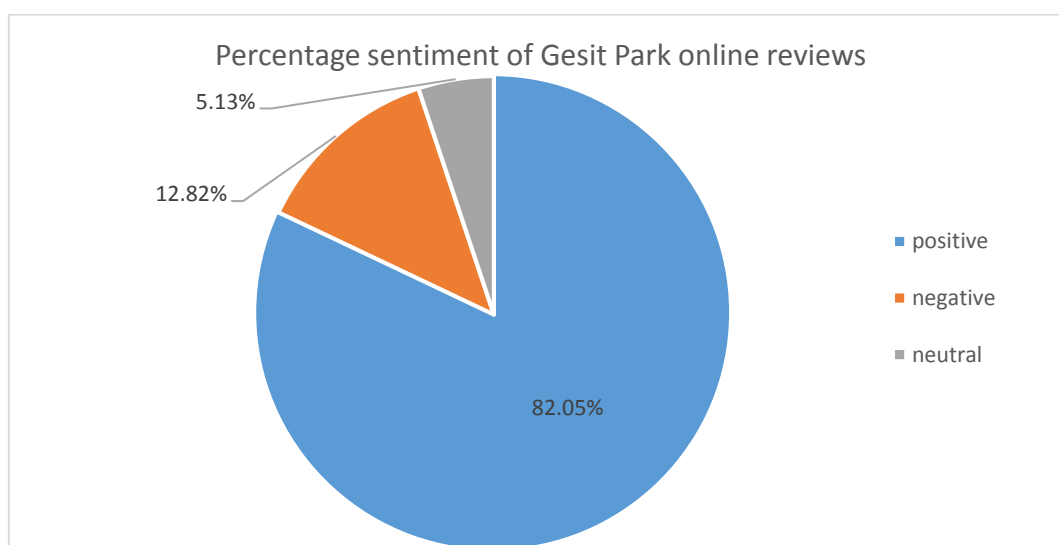
Figure 4.5 Percentage Distribution of Gesit Park Reviews

Form figure 4.5 we can see in the blue color area the percentage of sentiment positive mentions is 82.05%, a red color area the percentage sentiment negative mentions is 12.82 %, and the green color area is percentage sentiment neutral mentions with 5.13 %. By ignored the neutral mentions, the brand reputation score of Gesit Park, Net Reputation Score: [82.05 % positive mentions – 12.82 % negative mentions]. The brand reputation score is 69.23 %, represents a brand with all positive mentions or good reputation. Positive mentions more than negative mentions from user's reviews opinion of the park.

4.5.5 Brand Reputation of Fitness Park

Based on Fitness Park reviews data, we calculated the text opinion of users using the sentiment analysis to find out the score and predicate of opinion. The total of reviews is 409 reviews, but we filtered, we used the data only reviews with text comment in the review. We selected 185 reviews to analyze the brand score reputation. Detail of data classification of the sentiment analysis process can be seen in Appendix 1 (Table A1.5 distribution of sentiment analysis of user's reviews Fitness Park). From the table we can see the score of text reviews, R is review. R1 until R185 represented text reviews from user's opinion of the park. This is the process to understand the sentiment of reviews which positive, negative, or neutral.

Implementation of sentiment classification from 185 reviews, we got the values of sentiment distribution of Fitness Park reviews calculated as follows: 147 sentiment positive mentions, 21 sentiment negative mentions, and 17 sentiment neutral mentions. From the result that used to calculate the brand reputation based on the distribution of sentiment with positive and negative. The next process is to calculate the brand reputation score with Net Reputation Score formula. Figure 4.6 shows the percentage distribution sentiment opinion of Fitness Park.
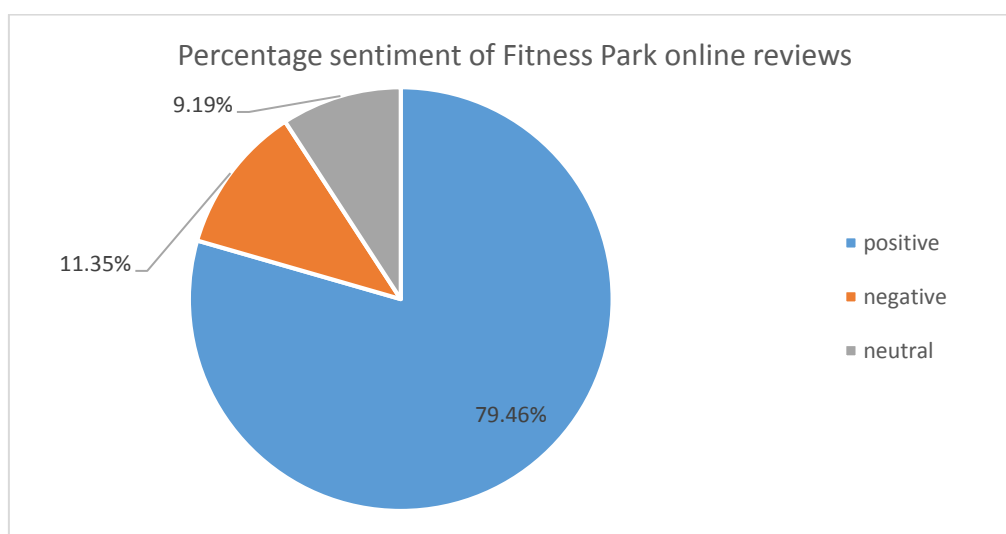
Figure 4.6 Percentage Distribution of Sentiment Fitness Park Reviews

Form figure 4.6 we can see in the blue color area the percentage of sentiment positive mentions is 79.46 %, a red color area the percentage sentiment negative mentions is 11.35 %, and the green color area is percentage sentiment neutral mentions with 9.19 %. By ignored the neutral mentions, the brand reputation score of Fitness Park, Net Reputation Score: [79.46 % positive mentions – 11.35 % negative mentions]. The brand reputation score is 68.11 %, represents a brand with all positive mentions or good reputation. Positive mentions more than negative mentions from user's reviews opinion of the park.

4.5.6 Brand Reputation of Jomblo Park

Based on Jomblo Park reviews data, we calculated the text opinion of users using the sentiment analysis to find out the score and predicate of opinion. The total of reviews is 1234 reviews, but we filtered, we used the data only reviews with text comment in the review. We selected 631 reviews to analyze the brand score reputation. Detail of data classification of the sentiment analysis process can be seen in Appendix 1 (Table A1.6 distribution of sentiment analysis of user's reviews Jomblo Park). From the table we can see the score of text reviews, R is review. R1 until R631 represented text reviews from user's opinion of the park. This is the process to understand sentiment of reviews which positive, negative, or neutral.

Implementation of sentiment classification from 631 reviews, we got the values of sentiment distribution of Jomblo Park reviews calculated as follows: 489 sentiment positive mentions, 77 sentiment negative mentions, and 65 sentiment neutral mentions. From the result that used to calculate the brand reputation based on the distribution of sentiment with positive and negative. The next process is to calculate the brand reputation score with Net Reputation Score formula. Figure 4.7 shows the percentage distribution sentiment opinion of Jomblo Park.
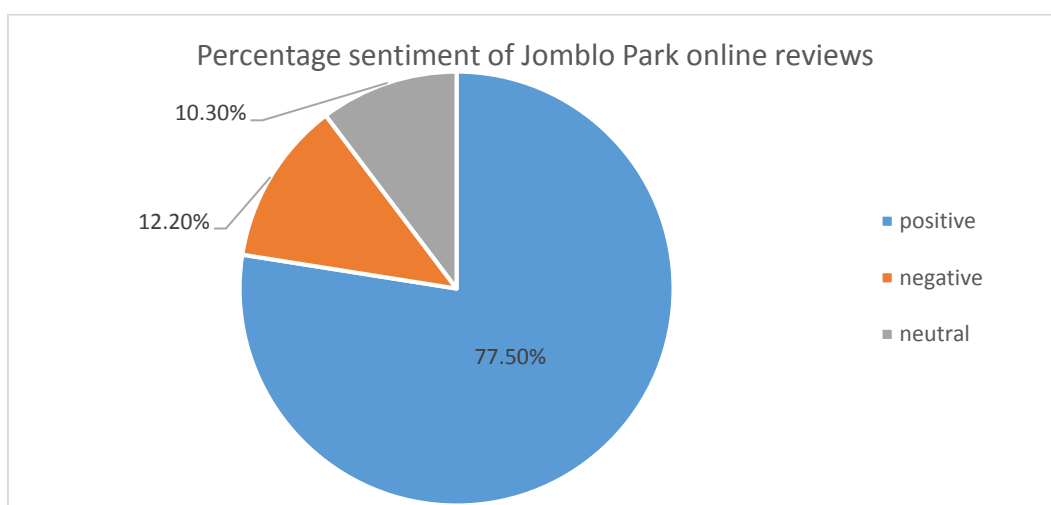
Figure 4.7 Percentage Distribution of Sentiment Jomblo Park Reviews

Form figure 4.7 we can see in the blue color area the percentage of sentiment positive mentions is 77.50 %, a red color area the percentage sentiment negative mentions is 12.20 %, and the green color area is percentage sentiment neutral mentions with 10.30 %. By ignored the neutral mentions, the brand reputation score of Jomblo Park, Net Reputation Score: [77.50 % positive mentions – 12.20 % negative mentions]. The brand reputation score is 65.30 %, represents a brand with all positive mentions or good reputation. Positive mentions more than negative mentions from user's reviews opinion of the park.

4.5.7 Brand Reputation of Film Park

Based on Film Park reviews data, we calculated the text opinion of users using the sentiment analysis to find out the score and predicate of opinion. The total of reviews is 1319 reviews, but we filtered, we used the data only reviews with text comment in the review. We selected 710 reviews to analyze the brand score reputation. Detail of data classification of the sentiment analysis process can be seen in Appendix 1 (Table A1.7 distribution of sentiment analysis of user's reviews Film Park). From the table we can see the score of text reviews, R is review. R1 until R710 represented text reviews from user's opinion of the park. This is the process to understand sentiment of reviews which positive, negative, or neutral.

Implementation of sentiment classification from 710 reviews, we got the values of sentiment distribution of Film Park reviews calculated as follows: 578 sentiment positive mentions, 94 sentiment negative mentions, and 38 sentiment neutral mentions. From the result that used to calculate the brand reputation based on the distribution of sentiment with positive and negative. The next process is to calculate the brand reputation score with Net Reputation Score formula. Figure 4.8 shows the percentage distribution sentiment opinion of Film Park.
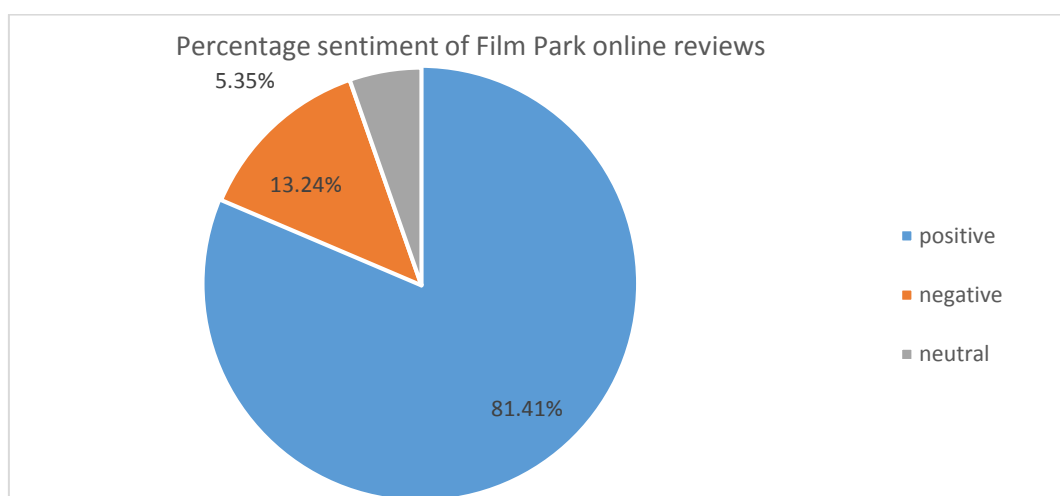
Figure 4.8 Percentage Distribution of Sentiment Film Park Reviews

Form figure 4.8 we can see in the blue color area the percentage of sentiment positive mentions is 81.41 %, a red color area the percentage sentiment negative mentions is 13.24 %, and the green color area is percentage sentiment neutral mentions with 5.35 %. By ignored the neutral mentions, the brand reputation score of Film Park, Net Reputation Score: [81.41 % positive mentions – 13.24 % negative mentions]. The brand reputation score is 68.17 %, represents a brand with all positive mentions or good reputation. Positive mentions more than negative mentions from user's reviews opinion of the park.

4.5.8 Brand Reputation of Lansia Park

Based on Lansia Park reviews data, we calculated the text opinion of users using the sentiment analysis to find out the score and predicate of opinion. The total of reviews is 2815 reviews, but we filtered, we used the data only reviews with text comment in the review. We selected 1411 reviews to analyze the brand score reputation. Detail of data classification of the sentiment analysis process can be seen in Appendix 1 (Table A1.8 distribution of sentiment analysis of user's reviews Lansia Park). From the table we can see the score of text reviews, R is review. R1 until R1411 represented text reviews from user's opinion of the park. This is the process to understand sentiment of reviews which positive, negative, or neutral.

Implementation of sentiment classification from 1411 reviews, we got the values of sentiment distribution of Lansia Park reviews calculated as follows: 1195 sentiment positive mentions, 107 sentiment negative mentions, and 109 sentiment neutral mentions. From the result that used to calculate the brand reputation based on the distribution of sentiment with positive and negative. The next process is to calculate the brand reputation score with Net Reputation Score formula. Figure 4.9 shows the percentage distribution sentiment opinion of Lansia Park.
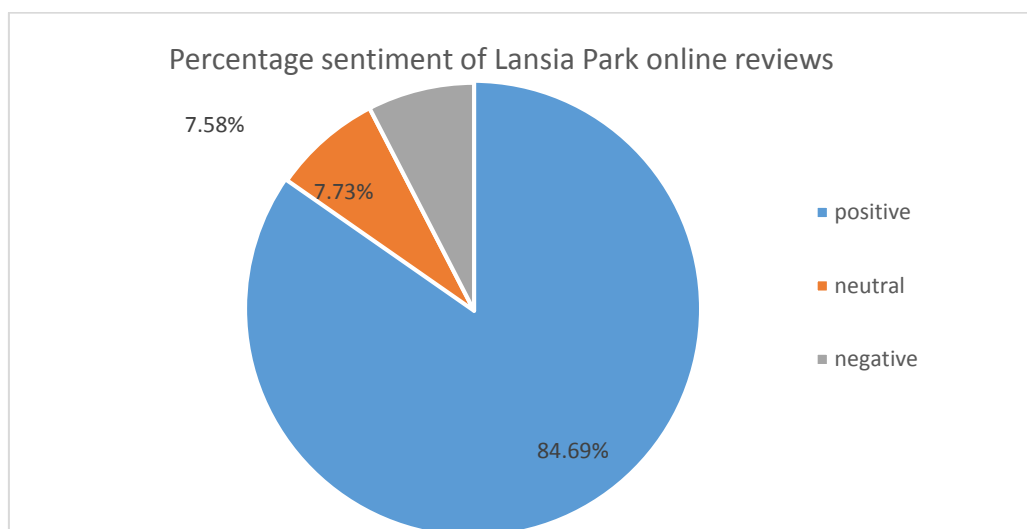
Figure 4.9 Percentage Distribution of Sentiment Lansia Park Reviews

Form figure 4.9 we can see in the blue color area the percentage of sentiment positive mentions is 84.69 %, a red color area the percentage sentiment negative mentions is 7.58 %, and the green color area is percentage sentiment neutral mentions 7.73 %. By ignored the neutral mentions, the brand reputation score of Lansia Park, Net Reputation Score: [84.69 % positive mentions – 7.58 % negative mentions]. The brand reputation score is 77.11 %, represents a brand with all positive mentions or good reputation. Positive mentions more than negative mentions from user's reviews opinion of the park.

4.5.9 Brand Reputation of Pet Park

Based on Pet Park reviews data, we calculated the text opinion of users using the sentiment analysis to find out the score and predicate of opinion. The total of reviews is 414 reviews, but we filtered, we used the data only reviews with text comment in the review. We selected 202 reviews to analyze the brand score reputation. Detail of data classification of the sentiment analysis process can be seen in Appendix 1 (Table A1.9 distribution of sentiment analysis of user's reviews Pet Park). From the table we can see the score of text reviews, R is review. R1 until R202 represented text reviews from user's opinion of the park. This is the process to understand sentiment of reviews which positive, negative, or neutral.

Implementation of sentiment classification from 202 reviews, we got the values of sentiment distribution of Pet Park reviews calculated as follows: 148 sentiment positive mentions, 31 sentiment negative mentions, and 23 sentiment neutral mentions. From the result that used to calculate the brand reputation based on the distribution of sentiment with positive and negative. The next process is calculate the brand reputation score with Net Reputation Score formula. Figure 4.10 shows the percentage distribution sentiment opinion of Pet Park.
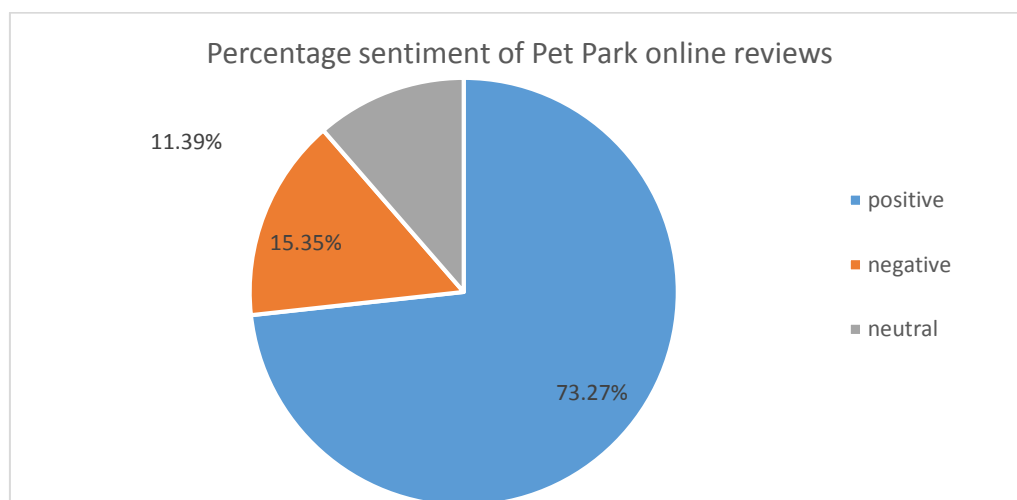
Figure 4.10 Percentage Distribution of Sentiment Pet Park Reviews

Form the figure 4.10 we can see in the blue color area the percentage of sentiment positive mentions is 73.27 %, a red color area the percentage sentiment negative mentions is 15.35 %, and the green color area is percentage sentiment neutral mentions with 11.39 %. By ignored the neutral mentions, the brand reputation score of Pet Park, Net Reputation Score: [73.27 % positive mentions – 15.35 % negative mentions]. The brand reputation score is 57.92 %, represents a brand with all positive mentions or good reputation. Positive mentions more than negative mentions from user's reviews opinion of the park.

4.5.10 Brand Reputation of Inclusion Park

Based on Inclusion Park reviews data, we calculated the text opinion of users using the sentiment analysis to find out the score and predicate of opinion. The total of reviews is 46 reviews, but we filtered, we used the data only reviews with text comment in the review. We selected 30 reviews to analyze the brand score reputation. Detail of data classification of the sentiment analysis process can be seen in Appendix 1 (Table A1.10 distribution of sentiment analysis of user's reviews Inclusion Park). From the table we can see the score of text reviews, R is review. R1 until R30 represented text reviews from user's opinion of the park. This is the process to understand the sentiment of reviews which positive, negative, or neutral

Implementation of sentiment classification from 30 reviews, we got the values of sentiment distribution of Inclusion Park reviews calculated as follows: 20 sentiment positive mentions, 4 sentiment negative mentions, and 6 sentiment neutral mentions. From the result that used to calculate the brand reputation based on the distribution of sentiment with positive and negative. The next process is to calculate the brand reputation score with Net Reputation Score formula. Figure 4.11 shows the percentage distribution sentiment opinion of Inclusion Park.

Percentage sentiment of Inclusion Park online reviews

- positive: 66.67%
- neutral: 20.00%
- negative: 13.33%
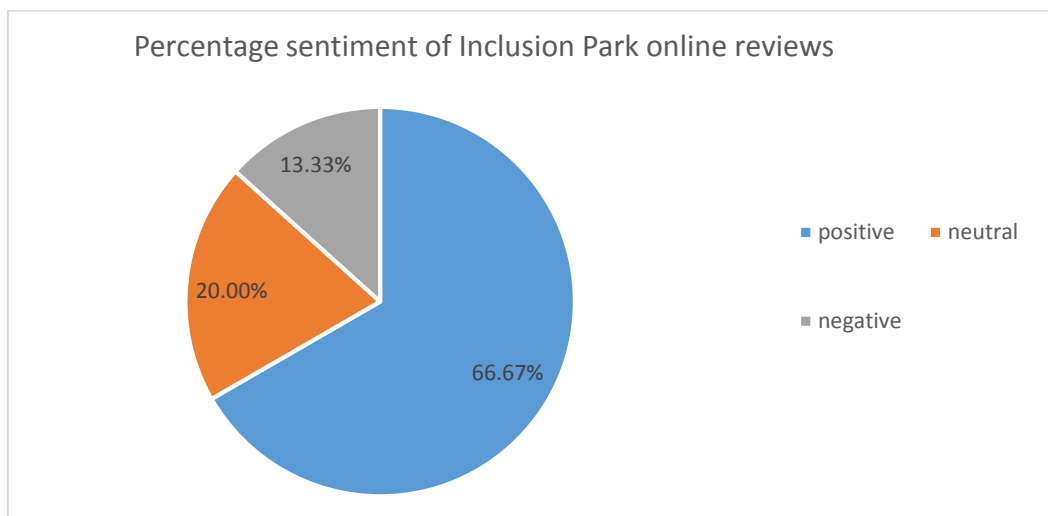
Figure 4.11 Percentage Distribution of Inclusion Park Reviews

Form figure 4.11 we can see in the blue color area the percentage of sentiment positive mentions is 66.67 %, a red color area the percentage sentiment negative mentions is 20 %, and the green color area is percentage sentiment neutral mentions with 13.33%. By ignored the neutral mentions, the brand reputation score of Inclusion Park, Net Reputation Score: [66.67 % positive mentions – 13.33 % negative mentions]. The brand reputation score is 53.34 %, represents a brand with all positive mentions or good reputation. Positive mentions more than negative mentions from user's reviews opinion of the park.

4.5.11 Summary All Sentiment Reviews of 10 Thematic Parks

Table 4.1 shows the distribution of total reviews and brand reputation score of 10 thematic parks.

Table 4.1 Distribution Brand Reputation Score of 10 Thematic Parks

Location	Total Review	Brand Reputation Score (%)	Predicate
Superhero Park	755	74.50	Positive
Centrum Music Park	390	78.97	Positive
Photo Park	391	73.40	Positive
Gesit Park	78	69.23	Positive
Fitness Park	185	68.11	Positive
Jomblo Park	631	65.30	Positive
Film Park	710	68.17	Positive
Lansia Park	1411	77.11	Positive
Pet Park	202	57.92	Positive
Inclusion Park	30	53.33	Positive

The reputation result based on sentiment analysis score 10 thematic parks in Bandung City got the positive reputation. Superhero Park with total reviews 755, brand reputation score is 74.50 % predicate positive more than negative is mean brand with all positive mentions. Centrum Music Park with 390 reviews, brand reputation score is 78.97% positive, predicate positive more than negative, reputation is positive or good. Photo Park with 391 reviews, brand reputation score is 73.40 % positive, positive more than negative reputation is good. Gesit Park with 78 reviews, brand reputation score is 69.23% positive, reputation is good. Fitness Park with 185 reviews, brand reputation score is 68.11% positive, reputation is good. Jomblo Park with total 631 reviews, brand reputation score is 65.30 %, reputation is good. Film Park with total 710 reviews, brand reputation score is 68.17 % positive, reputation is good. Lansia Park with 1411 reviews, brand reputation score is 77.11% is positive, represents a (rare, unicorn) brand with all positive mentions. Pet Park with 202 reviews, brand reputation score is 57.92 %, represents a brand with all positive mentions. Inclusion Park with 30 reviews, reputation score is 53.33 % positive, represents a brand with all positive mentions. From 10 thematic parks we can see that based on the brand reputation score, Centrum Music Park is a park with the stronger brand reputation.

Figure 4.12 Distribution of Percentage Brand Reputation Score of 10 Thematic Parks, Bandung City

Figure 4.12 shows that a blue bar color is brand reputation score and rank of reputation from 10 thematic parks. Music Centrum Park was ranked first then Lansia Park, Superhero Park, Photo Park, Gesit Park, Film Park, Fitness Park, Jomblo Park, Pet Park, and the last ranked is Inclusion Park.

The data also show the number of reviewers for each park is widely various that probably implicates to the popularity of respective park. Figure 4.13 shows distribution of count of reviews and brand reputation score online reviews 10 thematic parks in Bandung City.
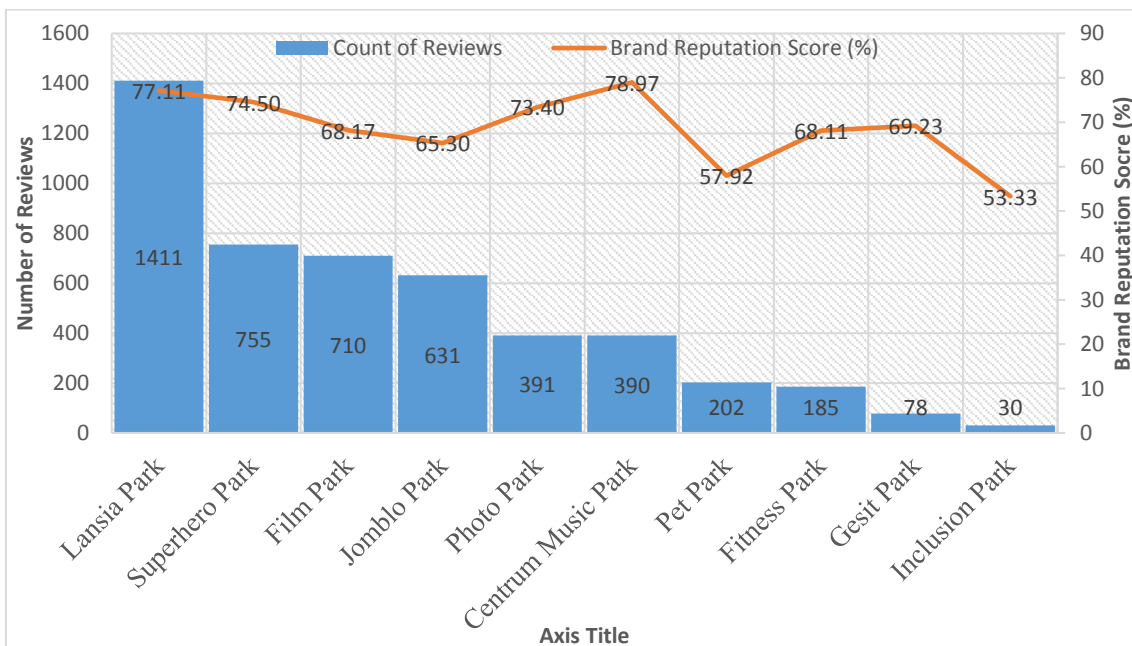
Figure 4.13 Distribution Count of Reviews and Brand Reputation Score of 10 Thematic Parks

From the figure 4.13, we can see the blue bar color is the number of reviews each park, and an orange line color is reputation score. The amount of reviews can affect the assessments of brand reputation. The more number of reviews, the greater information that can be obtained from brand reputation, so that it can be used as good data in brand evaluation. To sum up, overall sentiment from 10 thematic parks on average are calculated the brand reputation is 68.60% positive, it is mean that the brand reputation of 10 thematic parks in Bandung city has a good reputation. The number of reviews and classification polarity sentiment affects the brand reputation, form the number of reviews Lansia Park is most popular, but for the brand reputation score, Centrum Music Park has the highest brand reputation score followed by Lansia Park.

4.6 Section Conclusion

In this chapter we have investigated how online reviews of visitor of park reflects reputation of park. Build online reputation sentiment analysis helps to evaluate the opinion of brand. It also tells if the brand/product is being discussed and what is being said about it, especially in the case of social networking sites. Using an opinion mining, relevant microblogs were examined to determine sentiment, microblogged engagement, extent of engagement, and impact on the decision-making process.

Understanding brand's reputation can be a challenge as it is really defined by how viewed by others rather than our own perceptions. When a person searches for online, they will develop a first impression based on what they find, especially on the first one or two pages of search results. Regularly monitoring the reputation score helps to improve operations, performance and users experience. We found that form 10 thematic parks as case study has a positive assessment of the brand reputation. Based on the brand reputation score using sentiment analysis form user online reviews, Centrum Music Park was a first rank with score 78.97 % positive mentions and Inclusion Park is the last ranked with score 53.33 % positive mentions. The score of brand reputation from 10 thematic parks in the city of Bandung gets a reputation value percentage with an average value of 68.60%. This shows that thematic parks have a good reputation, but with the acquisition of these values, it becomes a reference in improving the quality of the park.

The number of reviews from reviewers will influence the achievement of the reputation value of the brand so that a large number of reviews will make it easier to find out how much reputation is obtained and become material for evaluation in the future development of the park.

Sentiment analysis is useful in brand monitoring because it helps to understand how the brand reputation evolves over time. Identify potential brand and the problem of the brand and know to take immediate action. Prioritize what need to be put out immediately and what mentions can wait. Use results of sentiment analysis to design better informed questions to ask on future surveys. Automate systems to run sentiment analysis on all incoming users support queries and analytics to gain deep

insight into what's happening across of users support. Reputation is something that can be molded over time. With dedicating time and effort to maintain or improve the bran reputation, can expect to see quantifiable results that will improve. Brand with a good online reputation are trusted more because people on the opinions of others. People appear to trust a service or place destination, others are likely to follow suit with the same sentiment.

A strong and well managed online reputation of place ensures that city have a great first impression on their prospects. It focuses on place positive brand image by identifying the key user touch points and using them to build positive first impressions. With advancements in machine learning, and the internet of thing, we can get a much clearer, more accurate, and more context and a broader set of emotions.

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Chapter 5. Effectiveness of the Place Branding Strategies by Rating Online Reviews Data

5.1 Introduction

The benefits and functions of the ecosystem green space for humans can be direct or indirect. In many studies of green spaces, parks and other green areas have been shown to provide benefits by making the city more livable and sustainable [1]. Urban parks provide a multiplicity of benefits to their communities. They create recreation opportunities, preserve open space and wildlife habitats, beautify neighborhoods and sections of cities, serve monumental or memorial functions, provide visual diversity, act as landmarks, and even guide traffic flow [2]. Parks are the choice of the community to spend their free time because they do not require money to enjoy them, and they are open spaces that are comfortable to stop at [3]. The existence of a city park [4] is an important part of a complex ecosystem's urban network that provides significant ecosystem services. The uses of a city park include environmental, aesthetic, recreation, psychological, social, and economic aspects [5].

Nowadays, cities, regions, and even countries across the entire world develop strategies for the development of their competitive advantage against others [6]. They use branding strategy that has grown in the last decade. The branding positions are intended to promote their uniqueness amongst a growing competition for capitals, visitors, residents, and corporations. Though, the branding position is not only used by global cities, capitals, and tourist destinations but also now is used by growing smaller cities and even urban parks to make purposes to brand themselves.

One of the concepts to make parks known by the people is the place branding that was initiated by the city of Bandung. Provision of parks in residential areas of the city of Bandung has experienced a change to become a park with a city service scale and become a key attraction for new movements as a public space that is used as a source of entertainment and recreation of urban communities with new physical designs and attractive facilities [7, 8, 9]. Revitalizing public spaces into several thematic parks are made as differentiation aspects from other cities and as a city branding of Bandung. The thematic park is a park with a variety of interesting themes and an artistic atmosphere that prepared to be used as a creative space [10]. Creative space as a medium for human creative activities can be connected within the context of urban space; this is because human creative activities can be in various types [11, 12].

Branding is an effort to build self-public images, products or services in accordance with the expectations themselves [13]. The image is obtained through a good understanding of the public about the object being imaged. Therefore, branding is done by providing adequate information and experience to the public about the object of branding [14]. Place branding as a term has been mixed and matched indiscriminately with other terms such as place marketing, urban marketing, and place promotion [15]. The marketing of urban places has been practiced, at least, since the nineteenth century

[16]; cities increasingly tend to rely on its methods in the last three decades, when competition for inward investment, tourism revenues, and residents at various spatial scales intensified. The scope and effectiveness of city marketing is largely determined by the selection and application of the appropriate combination of these measures, although adopting the marketing mix, as suggested by general marketing, distinguishes between four distinct strategies for place improvement that are the foundations for building a competitive advantage, i.e.: design (e.g., character); infrastructure (e.g., fixed environment); basic services (e.g., service provider); and attractions (e.g., entertainment and recreation) [17].

Based on previous studies [18], place attachment has two basic forms: as an emotional bond and as a relationship of dependence-identity of a place. Place attachment as an emotional bond refers to a relationship developed to a particular place through repeated positive interactions [19]. Place attachment arises when setting (e.g., local park) is imbued with meanings that create or enhance one's emotional ties to it [20]. The definition of place attachment is as an attitude of dependence on the place (place dependence) and its identity (place identity) [21]. The impact of the thematic branding concept is assumed to affect visits by visitors, and promote the wider community to increasingly recognize the existence of the park. The thematic branding concept used in the park that has indirectly created segmentation for both park users as well as the activities in the park. The problem is determining the effectiveness of the strategies of place branding related to the thematic park concept in Bandung City.

Assessments and perceptions of thematic parks are needed to determine the extent to which thematic parks are known to the wider community and become a type of place branding for the city of Bandung. A large part of the global population is now connected via online social networks on social media where they share experiences, stories, and consequently, influence each other's perceptions [22]. One way to get information about perceptions and assessments of a place through social networks is through online reviews [23]. One of the ways to identify whether branding is successful or not is to look at the users' perceptions and how much the brand is known (rating about that place) based on the assessment of the users as a benchmark [24]. Social networks can be used in all of the stages with lower costs compared to traditional marketing and more effective branding strategies [25].

In this chapter, we used online reviews to determine the perceptions and assessments of visitors to thematic parks in Bandung city. We used user reviews on Google Maps to collect data on visitors' opinions. Opinion mining or text mining was used to analyze and summarize online review texts [26]. Text mining refers to the extraction of information from unstructured data, and it is used in many patent research fields because it can work with a large amount of text [27]. The aims of this chapter are to identify the effectiveness of thematic parks in creating a branding of the places in the city of Bandung and to determine the perceptions of the community about thematic parks through social networks by rating reviews. The perceptions are developed by assessing visitor's online review provided by Google Maps. This communication mode is considered to be more affective to spread

information widely and publicly influential. Besides, this kind of review enables visitors to generate public opinion more freely without any restriction that leads to psychological bias. Furthermore, the utilization of rating star symbol that commonly appears in Google online review also ease common people to justify their perception on the visited park. Subsequently, this user friendly justification would potentially implicate to the number of the next visitors in accordance with previous visitors' review. Ratings and reviews give users a voice, increase user confidence, enhance service visibility, and can dramatically increase branding.

5.2 Study Site of Parks

In this study, we took Cibeunying region as study location with 3 districts: Sumur Bandung District, Coblong District, and Bandung Wetan District based on distribution of revitalization of park to thematic park the most high frequency in 3 district in this region. Figure 5.1 shows the number of distribution of park and revitalization of park to thematic park in Cibeuying Region.
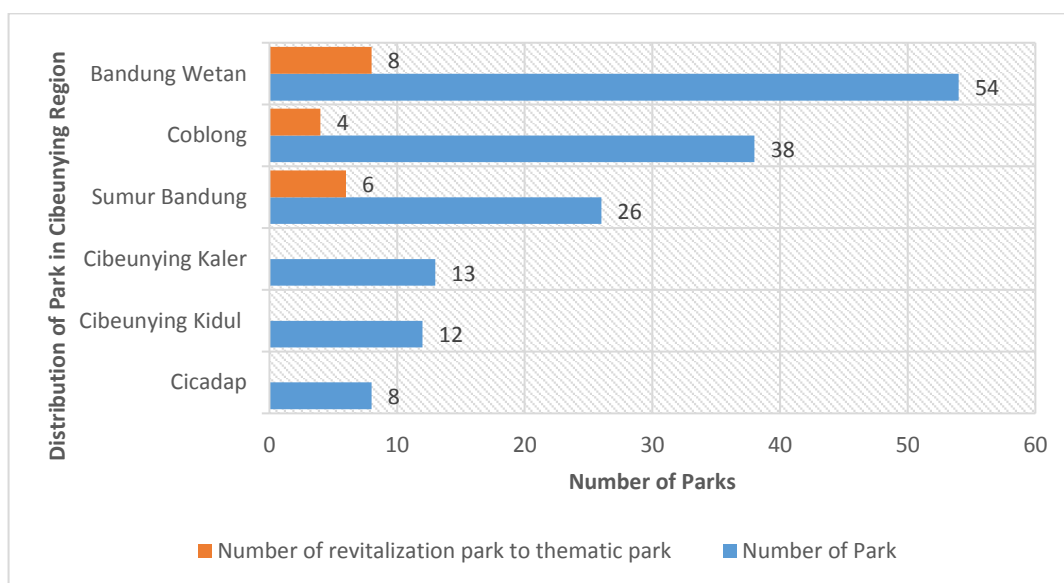
Figure 5.1 Distribution and Number Revitalization of Park in Cibeuying Region

Form figure 5.1 we can see distribution of revitalization of park in Cibeunying Region. The blue bar color is the total number of park, and the orange bar color is the number of revitalized of park. There are 3 districts that have developed park revitalization, namely Sumur Bandung district, Bandung Wetan District, and Coblong District. Sumur Bandung Distict with the total number of parks is 26 there are 6 revitalized parks to become thematic park, Bandung Wetan District the total number of park is 54 there are 8 revitalized parks, and Coblong District with a total of 38 parks there are 4 revitalized parks into thematic parks.

Detail of distribution of park and thematic park in Cibeuying Region with 3 districts, Sumur Bandung, Bandung Wetan, and Coblong shows in tables below.

Table 5.1 Distribution of Park in Sumur Bandung District, Bandung City

No	Name of Park	Location	Revitalization to thematic park	Area (m^2)
1	Braga - Lembong	Jl. Lembong	-	55
2	Texas Sister City 1	Jl. Wastukencana	-	181.6
3	Halaman Balai Kota	Jl. Wastukencana	Balai Kota Park	13800
4	Merdeka (Dewi Sartika)	Jl. Merdeka	-	14729
5	Depan Masjid Al Ukhuwah	Jl. Wastukencana	-	54
6	Jalur Perintis Kemerdekaan	Jl. Printis Kemerdekaan	-	105.95
7	Jalur Waska Barat	Jl. Waska	-	458.6
8	Nias	Jl. Nias	-	310
9	Patung Bola	Jl. Lembong	-	170
10	Jl. Anggrek	Jl. Anggrek	-	890
11	Tongkeng	Jl. Tongkeng	Tongkeng Park	3610
12	Bak Bunga Aceh/Sumatera	Jl. Aceh	-	405
13	Sentrum	Jl. Belitung	Centrum Music Park	2100
14	Jalur Aceh I	Jl. Aceh	-	867.8
15	Jalur Aceh II	Jl. Aceh	-	1840
16	Maluku	Jl. Ambon	-	24023
17	Puskesmas Tamblong	Jl. Tamblong	-	123
18	Buton	Jl. Buton	-	612
19	Simpang Lima	Jl. Asia Afrika	Cikapudung River spot Park	2839
20	R.E Martadinata/Aceh	Jl. R.E. Martadinata	-	765.5
21	Riau/A. Yani	Jl. Riau	-	685.6
22	Kosambi	Jl. Kosambi	-	759
23	Air Mancur Vanda	Jl. Merdeka	Vanda Park	1554
24	Pulau Jalan Jawa/Merdeka	Jl. Merdeka	Photo Park	3610
25	Lombok	Jl. Ambon - Jl. Lombok	-	330
26	Eks SPBU depan Pramuka	Jl. LLRE Martadinata	-	1566
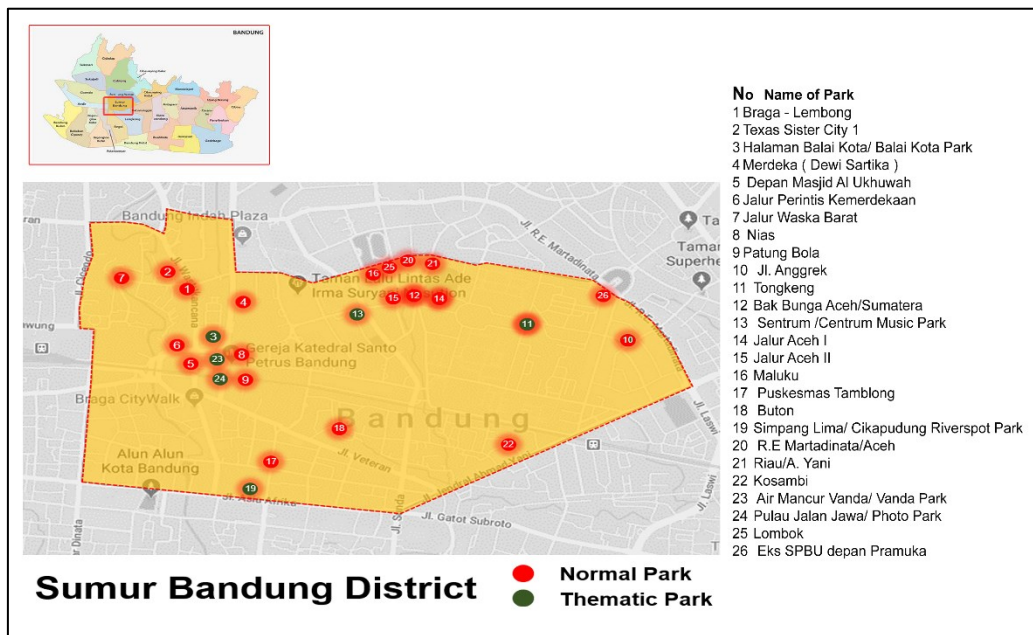
Figure 5.2 Map of Distribution Park in Sumur Bandung District

From figure 5.2 we can see distribution of park in Sumur Bandung District. The orange area shows the area of the Sumur Bandung District. There are 26 parks numbering with the names and locations of each park. The number on the green circle shows the revitalized park to be a thematic park, and the number on the red circle is a normal park.

Table 5.2 Distribution of Park in Bandung Wetan District, Bandung City

No	Name of Park	Location	Revitalization to thematic park	Area (m²)
(1)	(1)	(2)	(3)	(4)
1	Jl. Diponegoro - Jl. Trunojoyo	Jl. Diponegoro	-	709.18
2	Nyland	Jl. Nyland	-	783.75
3	Waska/Tamansari	Jl. Waska	-	81.49
4	Waska/Purnawarman (Texas)	Jl. Wastukancana	-	144.90
5	Waska/Pajajaran (Macan)	Jl. Wastukancana	-	127.50
6	Depan Galeria BIP Sumatera/Sulawesi	Jl. Sumatera	-	200.90
7	Waska Panglima	Jl. Wastukancana	-	137.40
8	Wastukancana/Tamansari	Jl. Tamansari	-	280
9	Kodya	Jl. Wastukencana	-	13965
10	Viaduct (Pelajar Pejuang dan Laskar Wanita)	Jl. Stasiun Timur	-	2550.45
11	Seram	Jl. Seram	-	9511.23
12	GOR Saparua	Jl. Ambon	-	44300
13	Lalu Lintas	Jl. Sumatera	-	45600.87
14	Stadion Siliwangi	Jl. Lombok	-	60576

(1)	(2)	(3)	(4)	(5)
15	Gedung Sate	Jl. Diponegoro	-	2893.70
16	PKK	Jl. Cibeunying Utara	-	688.25
17	Cibeunying Bank NISP	Jl. Cibeunying	Cibeuying Park	2839
18	Jalur Hijau Jalan Ciliwung	Jl. Ciliwung	Pet Park	6085
19	Jalur Hijau Jalan Citarum	Jl. Citarum	Inclusion Park	2111
20	Citarum	Jl. Citarum	-	1102.67
21	DKK Supratman	Jl. Supratman	Persib Park	11760
22	Trunojoyo	Jl. Trunojoyo	-	850
23	Cilaki Atas	Jl. Cilaki Atas	Lansia Park	16257
24	Cilaki Tengah	Jl. Cilaki	Kandanga Puspa Park	4200
25	Cilaki Bawah I dan II	Jl. Cilaki	-	9753
26	Cilaki	Jl. Cilaki	-	893
27	Progo	Jl. Progo	-	172
28	Gempol	Jl. Gempol	-	1245.50
29	Anggrek	Jl. Anggrek	Superhero Park	2051
30	Pramuka	Jl. R.E. Martadinata	-	13845.34
31	Lapang Gasibu	Jl. Gasibu	-	25964
32	Jalur Prabudimuntur/Surapati	Jl. Prabudimuntur	-	3600
33	Wira Angun-angun	Jl. Wira Angun-angun	-	918
34	Lapang Supratman	Jl. Supratman	-	9072.75
35	Cipunagara	Jl. Cipunagara	-	688
36	Salam Puskesmas	Jl. Salam	-	63.50
37	Rasamala	Jl. Rasamala	-	756.99
38	Lapang salam	Jl. Salam	-	1685
39	Cendana	Jl. Cendana	-	392.47
40	Pulau Jalan Sentot	Jl. Sentot	-	16.04
41	Rangga Malela	Jl. Rangga Malela	-	920.90
42	Pulau Jalan Tamansari/UNISBA	Jl. Tamansari	-	127.10
43	Jalur Hijau Tamansari	Jl. Tamansari	Film Park	1100
44	Gajah Lumantung	Jl. Gajah Lumantung	-	807.05
45	Ciungwanara	Jl. Badak Singa	-	1943
46	Cikapayang/Badak Singa	Jl. Badak Singa	-	846.34
47	Balubur/Tamansari	Jl. Balubur	-	117.30
48	Jalur Hijau Cikapayang	Jl. Cikapayang	-	1800
49	Pulau Jalan Balubur	Jl. Balubur	-	131.60
50	Skanda/Ganesha	Jl. Skanda	-	312.80
51	Dr. Slamet	Jl. Dr. Slamet	-	1521.70
52	Bak bunga nangkasuni	Jl. Nangkasuni	-	247
53	Cempaka	Jl. Cempaka	-	1785
54	Mangga	Jl. Mangga	-	2850
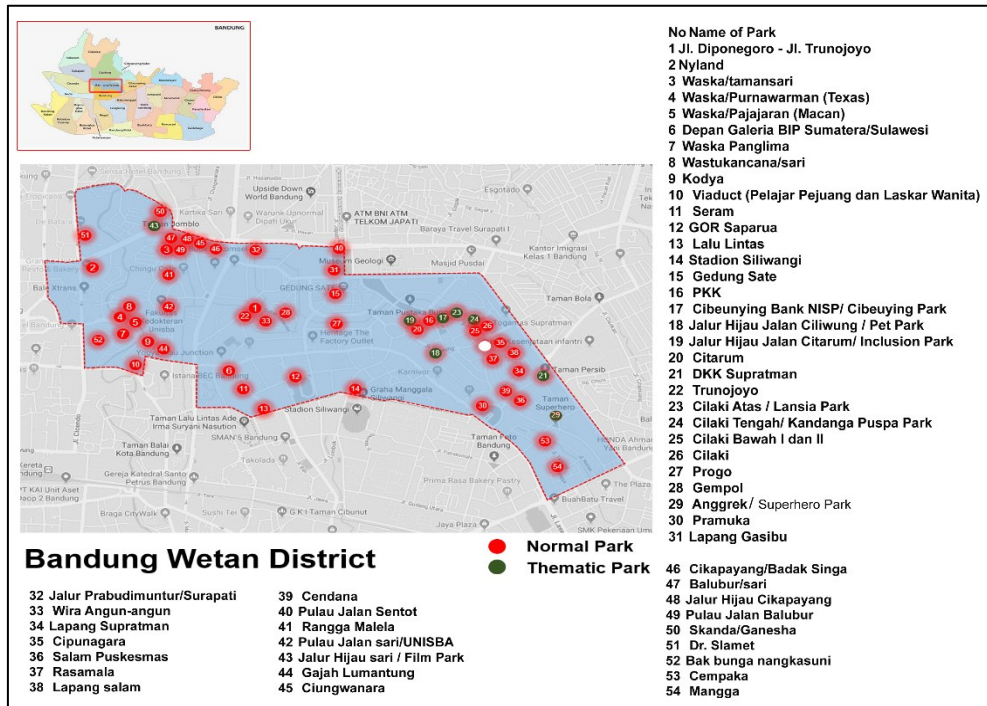
Figure 5.3 Map of Distribution Park in Bandung Wetan District

From figure 5.3 we can see distribution of park in Bandung Wetan District. The blue area shows the area of the Bandung Wetan District. There are 54 parks numbering with the names and locations of each park. The number on the green circle shows the revitalized park to be a thematic park, and the number on the red circle is a normal park.

Table 5.3 Distribution of Park in Coblong District, Bandung City

No	Name of Park	Location	Revitalization to thematic park	Area (m^2)
(1)	(1)	(2)	(3)	(4)
1	Bak Bunga Pot Simpang	Jl. Simpang	-	34
2	Dipatiukur	Jl. Dipatiukur	Gesit Park	755
3	Jalur Dago	Jl. Dago	-	2156
4	Keluarga Berencana	Jl. Setiabudhi	-	410
5	Sangkuriang	Jl. Siliwangi	-	59
6	Cihampelas	Jl. Cihampelas	-	365
7	Siliwangi	Jl. Siliwangi	Teras Cikapundung Park	5128
8	Ganesha	Jl. Ganesa	-	9612
9	Bapak Husen	Jl. Cipaganti	-	639
10	Bak Bunga Bbk. Siliwangi	Jl. Bbk. Siliwangi	-	134.6
11	Jalur Siliwangi	Jl. Siliwangi	Jomblo Park	2014

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(1)	(1)	(2)	(3)	(4)
12	JL. Teuku Umar	Jl. Teuku Umar	Taman Fitness	4073
13	Dayang Sumbi	Jl. Dayang Sumbi	-	754.6
14	Gelap Nyawang	Jl. Gelap Nyawang	-	1656.4
15	Dago Atas	Jl. Dago Atas	-	2760
16	Kebun Binatang	Jl. Taman Sari	-	35874
17	Lapang Lebak Siliwangi	Jl. Taman Sari	-	71568.13
18	Hewan	Jl. Taman Sari	-	2456
19	Tm. Pulau Jl. Tamansari	Jl. Sumur Bandung	-	244.74
20	Jalur Setiabudi	Jl. Cihampelas	-	965
21	Siliwangi	Ir. H. Juanda (simpang)	-	81
22	Tilil	Jl. Puter	-	2422.06
23	Eks SPBU Cikapayang	Jl. Ir. H. Djuanda	-	2490
24	Pulau Jalan Ir. H. DJuanda	Jl. Ir. H. Djuanda	-	36
25	Pulau Jalan Tamansari	Jl. Tamansari	-	36
26	Perumnas	Jl. Sadang serang	-	45
27	Jalur Gelap Nyawang	Jl. Gelap Nyawang	-	44
28	Babakan Siliwangi	Jl. Siliwangi	-	23052
29	Bak Bunga Jalan Pasupati	Jembatan Pasupati	-	350
30	Pulau Jalan Pasupati	Jl. Ir. H. Djuanda	-	384
31	Monumen Perjuangan Rakyat Jabar	Jl. Dipatiukur, Jl. Suci	-	83100
32	Bagusrangin	Jl. Bagusrangin	-	1560
33	Panatayuda	Jl. Panatayuda	-	2387
34	Singaperbangsa	Jl. Dipati Ukur	-	800
35	Hasanudin	Jl. Dipati Ukur	-	3400
36	Tubagus Ismail	Jl. Tubagus Ismail	-	86
37	Puskesmas Kebonlega	Jl. Kebonlega	-	800
38	Japati	Jl. Japati	-	updating
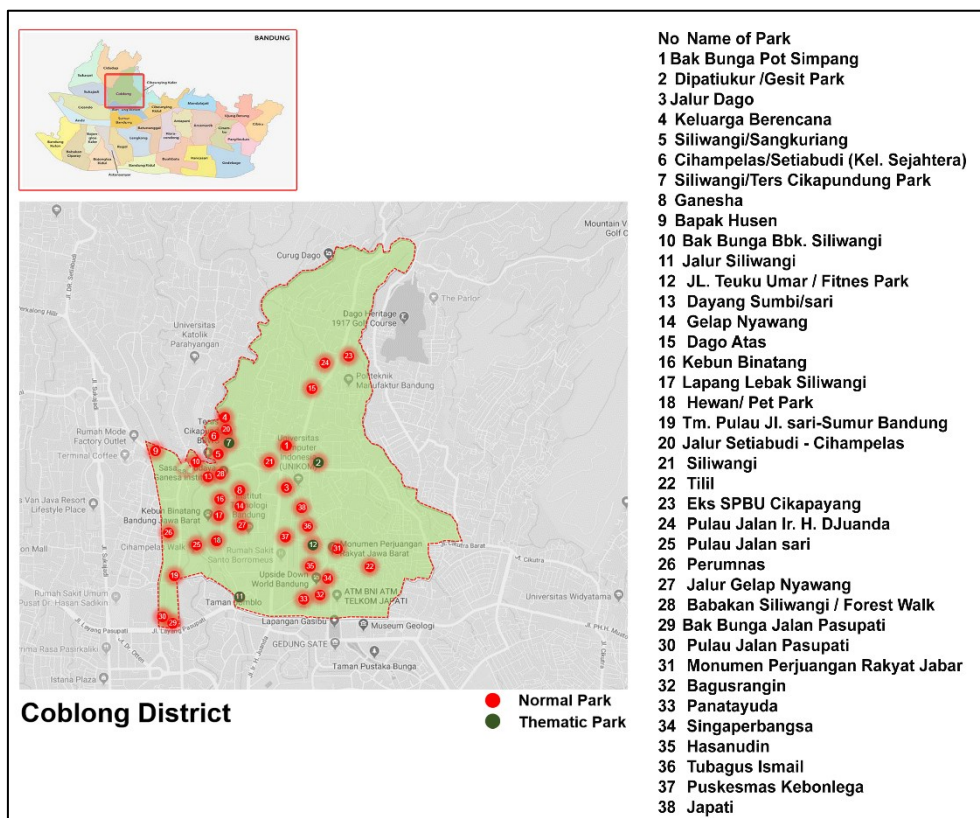
Figure 5.4 Map of Distribution Park in Coblong District

From figure 5.4 we can see distribution of park in Coblong District. The green area shows the area of the Coblong District. There are 38 parks numbering with the names and locations of each park. The number on the green circle shows the revitalized park to be a thematic park, and the number on the red circle is a normal park.

5.3 User Generated Rating and the Evaluation of Creditability

The level of online commercial activity, it is important to understand people's perceptions of the credibility of commercial web site information and the factors they find important in their evaluative processes. This is particularly critical given that, despite its popularity, online commercial transactions often lack elements that have traditionally served to ensure trust and credibility among parties [28]. The capacity of digital media to aggregate information and to connect individuals to one another offers new potential for determining information quality and credibility [29]. In addition to the place branding, two factors were varied systematically by altering information on the web page screenshots used in the study: (a) the number of ratings provided about the place and (b) the average rating provided about the place by other users. Specifically, the pages showed the number of user ratings and average "star" ratings (on a 1-5 scale, where 5 is the best rating).

The scores of the parks were represented by user ratings and a variety of other signals. Google's algorithm is designed to extrapolate or estimate the overall rating. The scores are as follows: 5 stars

"excellent", 4 stars "very good", 3 stars "average", 2 stars "poor", and 1 star "terrible" [30]. In general, the score is determined from all user reviews, including reviews that only give stars and those with comments. We calculated the score with a weighted average. Weighted average: (total point sum)/ (number of voters).
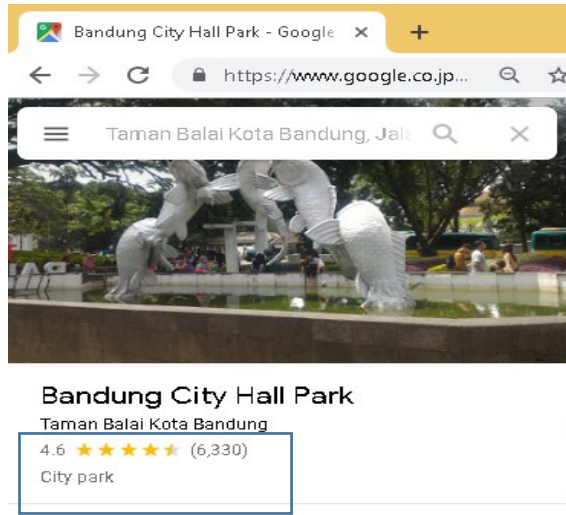
Figure 5.5 Example of Rating Score by User Reviews
Source: https://www.google.co.jp/maps/place/Bandung+City+Hall+Park (last accessed on 10 April 2019)

5.4 Comparison Number of Reviews of Thematic Parks and Normal Parks

We collected data from online reviews from users of Google maps based on the locations of the parks. The influence of the park provides a special attraction to visitors. If each user review presents a noisy signal of quality, then having many reviews should cause the overall rating to contain more information and hence have a larger impact. Data online reviews of normal of the park from 3 districts in Cibeuying Region of Bandung City shown in figures below.
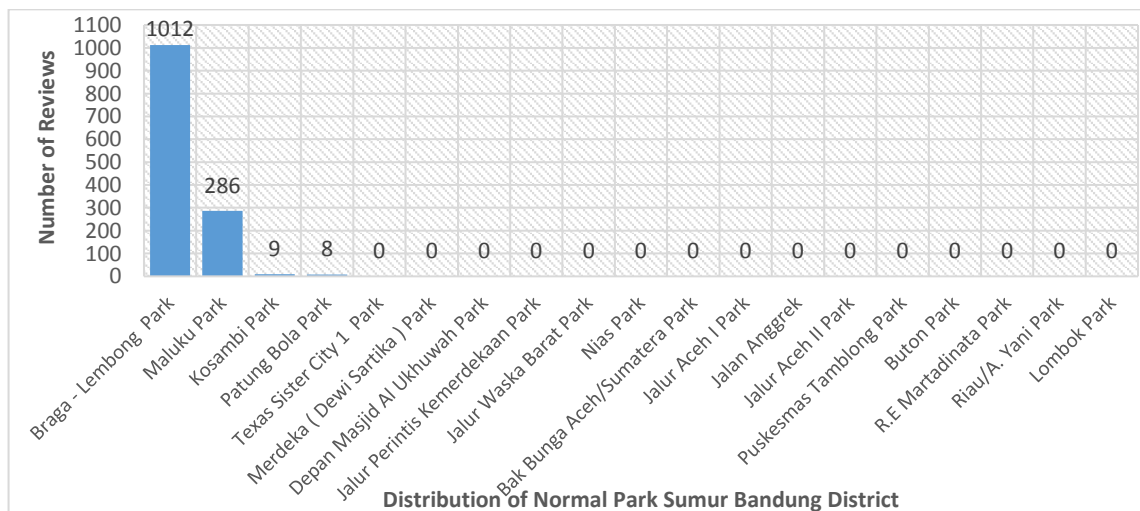
Figure 5.6 Distribution Number of Reviews of Park in Sumur Bandung District, Bandung City

After an investigation of online reviews using Google Maps of the park in Sumur Bandung District, we collected all total users reviews of 20 normal parks. There are 4 parks has online reviews. Braga Park with total reviews 1012, Maluku Park 286 reviews, Kosambi Park 9 reviews, and Patung Bola Park 8 reviews. The others park with 16 parks there is not found the online reviews data.
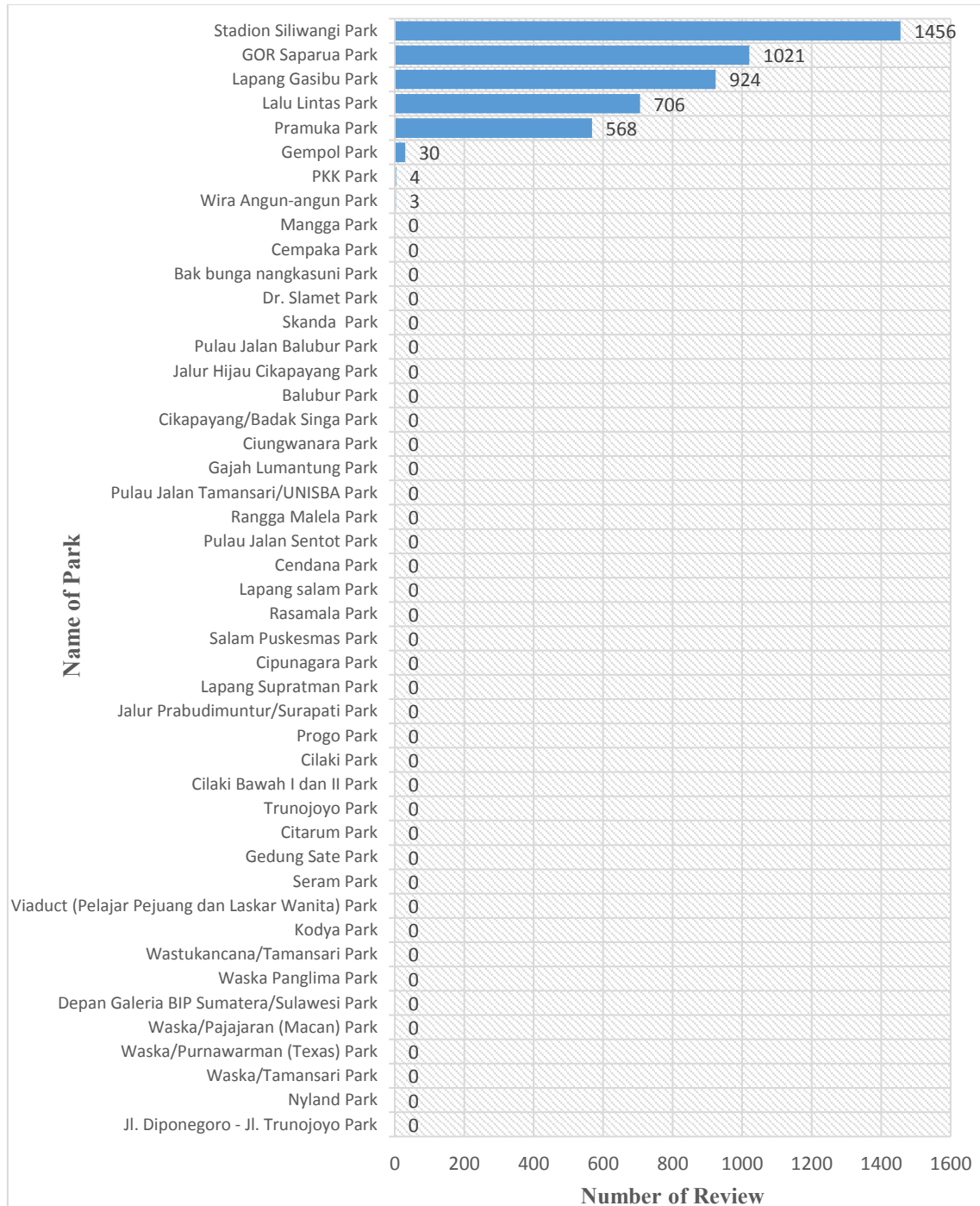
Figure 5.7 Distribution Number of Reviews of Park in Bandung Wetan District, Bandung City

Data investigated online reviews using Google Maps of the park in Bandung Wetan district, we collected all total users reviews of 46 of normal parks. There are 8 parks has online reviews. Stadion Siliwangi Park with total reviews 1456, GOR Saparua Park 1021 reviews, Lapang Gasibu Park 924 reviews, Lalu lintas Park 706 reviews, Pramuka Park 568 reviews, Gempol Park 30 reviews, PKK Park 4 reviews, and Wira Angun-angun Park 3 reviews. The others park with 38 parks there is not found the online reviews data.
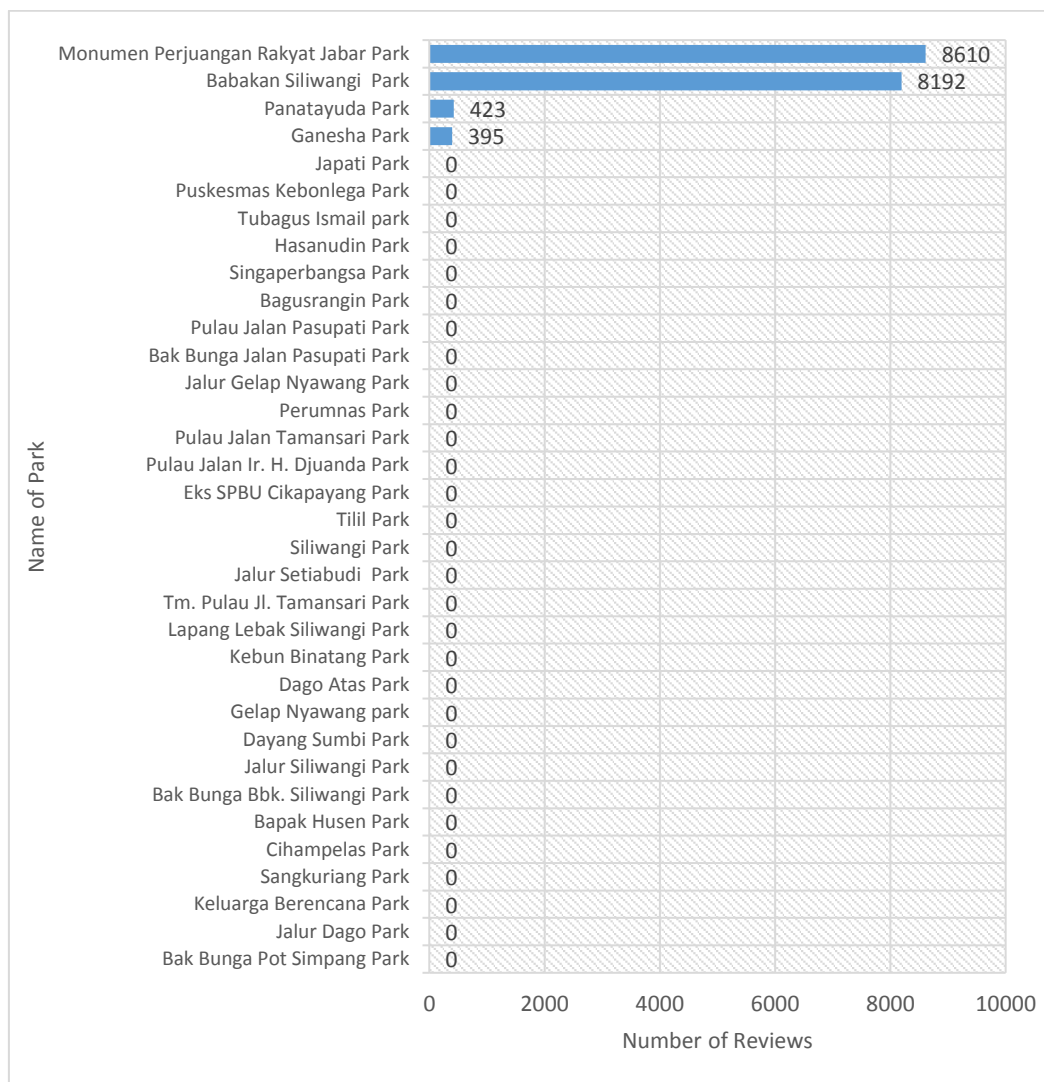
Figure 5.8 Distribution Number of Reviews of Park in Coblong District, Bandung City

Data investigated online reviews using Google Maps of the park in Coblong district, we collected all total users reviews of 34 of normal parks. There are 4 parks has online reviews. Monumen Perjuangan Rakyat Jabar Park with total reviews 8610, Babakan Siliwangi Park 8192 reviews, Panatayuda Park 423 reviews, and Ganesha Park 395 reviews. The others park with 30 parks there is not found the online reviews data. Figure 5.6 to figure 5.8 shows that the number reviews from social networks are

very less or even reviews and locations are not found on online maps, only a few parks from each district. Compared to thematic parks shown in figure 5.9.
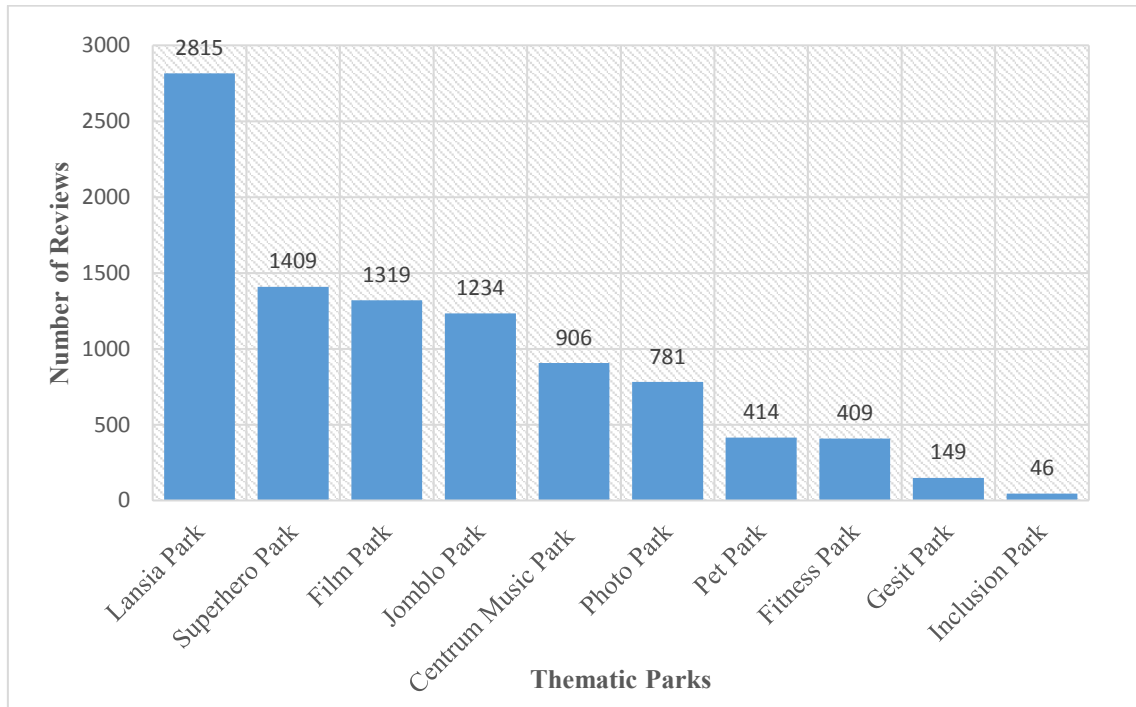
Figure 5.9 Statistical Number of Reviews 10 Thematic Parks

The results of the study show that the influence of the thematic park concept has a significant impact on the familiarity of visitors with thematic parks compared to normal parks. The average rating that park receive on the internet depends positively on the number of users who submit reviews. Based on the number of normal parks from 3 districts, with a total of 100 parks, only 16 parks received online reviews .This indicates that the user is not aware of the existence of the park or lack of information about the existence of the park. Compared to 10 thematic parks, statistics on the number of reviews that show appreciation from users with reviews and assessments of the park. Thematic park brands get more attention from users.

5.5 Review Summary of Thematic Parks Rating Distribution

Score ratings for local places are rated on a scale from 1 to 5 stars. By viewing the locations on Google Maps, we were able to see the Google score, top reviews, and the total number of reviews for each business. We selected 10 thematic parks with evaluation star rating and put the comment. The review summary based on score ratings explain below.

5.5.1 Rating Evaluation of Superhero Park Reviews
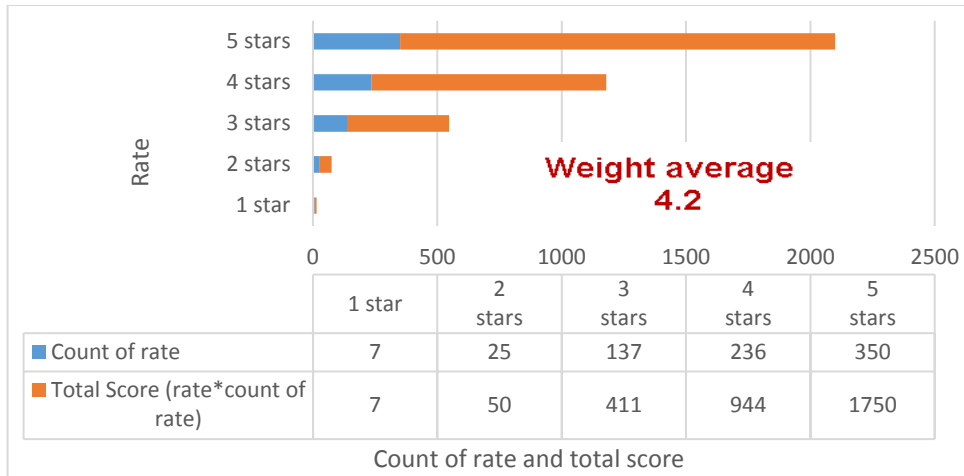
Figure 5.10 Rating Score of Superhero Park Reviews

From figure 5.10 we can see the count of rate and total score rating by user's online reviews evaluation. The total of reviews is 775.The blue bar color is count of rate from users, the orange bar color is total score after calculated with number of rate with weight of rate evaluation (star score). 350 reviewers gave rating with 5 stars, 236 reviewers gave rating 4 stars, 137 reviewers gave rating 3 stars, 25 reviewers gave rating 2 stars, and 7 reviewers gave rating 1 star. The weight average is 4.2 out of 5.0. Based on the score weight average, Superhero Park with predicate by scale of score is "Very good" rating.

5.5.2 Rating Evaluation of Centrum Music Park Reviews
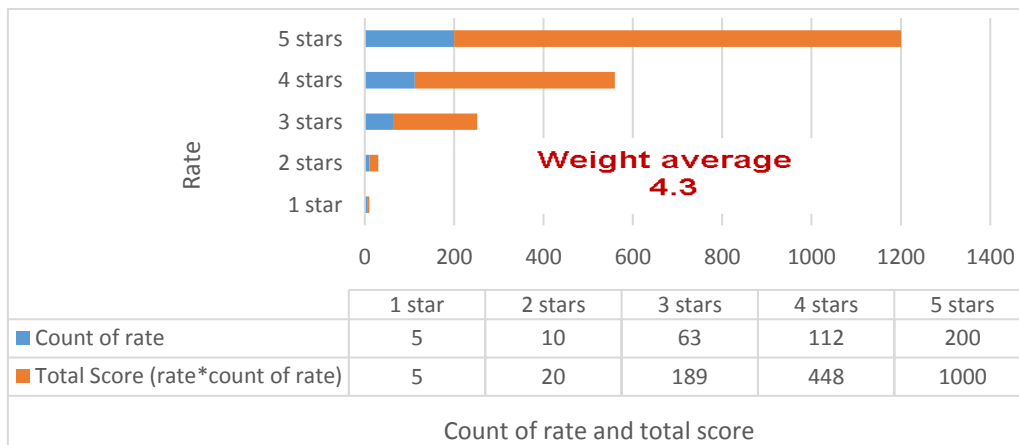
Figure 5.11 Rating Score of Centrum Music Park Reviews

From figure 5.11 we can see the count of rate and total score rating by user's online reviews evaluation. The total of reviews is 390.The blue bar color is count of rate from users, the orange bar color is total score after calculated with number of rate with weight of rate evaluation (star score). 200 reviewers

95

gave rating with 5 stars, 112 reviewers gave rating 4 stars, 63 reviewers gave rating 3 stars, 10 reviewers gave rating 2 stars, and 5 reviewers gave rating 1 star. The weight average is 4.3 out of 5.0. Based on the score weight average, Centrum Music Park with predicate by rating weight of score is "Very good" rating.

5.5.3 Rating Evaluation of Photo Park Reviews

	1 star	2 stars	3 stars	4 stars	5 stars
■ Count of rate	6	10	86	127	162
■ Total Score (rate*count of rate)	6	20	258	508	810
Count of rate and total score					
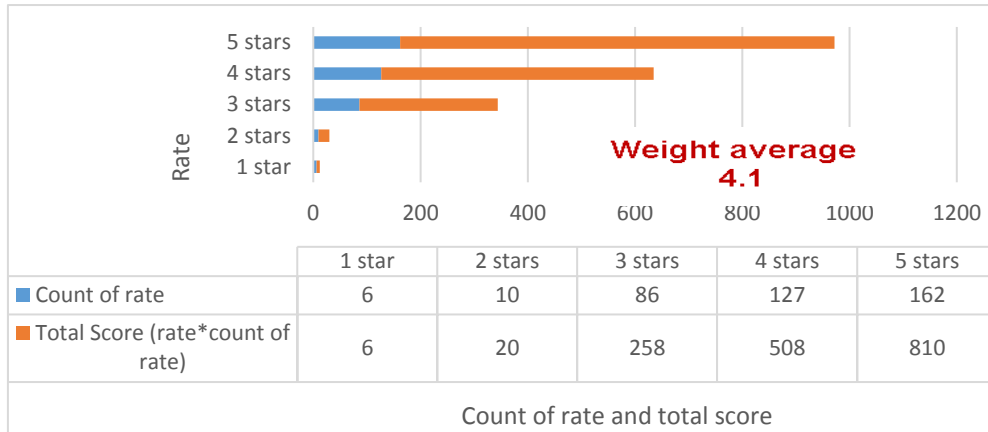
Figure 5.12 Rating Score of Photo Park Reviews

From figure 5.12 we can see the count of rate and total score rating by user's online reviews evaluation. The total of reviews is 391.The blue bar color is count of rate from users, the orange bar color is total score after calculated with number of rate with weight of rate evaluation (star score). 162 reviewers gave rating with 5 stars, 127 reviewers gave rating 4 stars, 86 reviewers gave rating 3 stars, 10 reviewers gave rating 2 stars, and 6 reviewers gave rating 1 star. The weight average is 4.1 out of 5.0. Based on the score weight average, Photo Park with predicate by rating weight of score is "Very good" rating.

5.5.4 Rating Evaluation of Gesit Park Reviews

	1 star	2 stars	3 stars	4 stars	5 stars
■ Count of rate	2	5	26	20	25
■ Total Score (rate*count of rate)	2	18	78	80	125
Count of rate and total score					
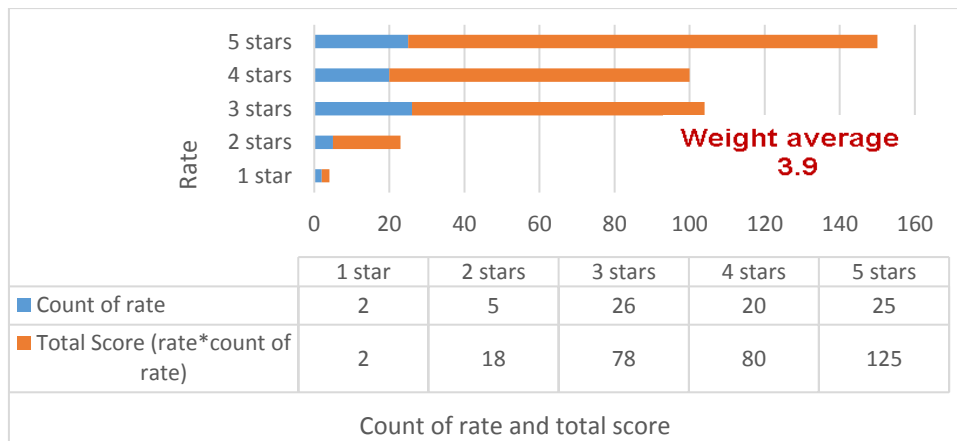
Figure 5.13 Rating Score of Gesit Park Reviews

From figure 5.13 we can see the count of rate and total score rating by user's online reviews evaluation. The total of reviews is 78.The blue bar color is count of rate from users, the orange bar color is total score after calculated with number of rate with weight of rate evaluation (star score). 25 reviewers gave rating with 5 stars, 20 reviewers gave rating 4 stars, 26 reviewers gave rating 3 stars, 5 reviewers gave rating 2 stars, and 2 reviewers gave rating 1 star. The weight average is 3.9 out of 5.0. Based on the score weight average, Gesit Park with predicate by rating weight of score is "Average" rating.

5.5.5 Rating Evaluation of Fitness Park Reviews

	1 star	2 stars	3 stars	4 stars	5 stars
■ Count of rate	2	7	35	53	88
■ Total Score (rate*count of rate)	2	14	105	212	440
Count of rate and total score					
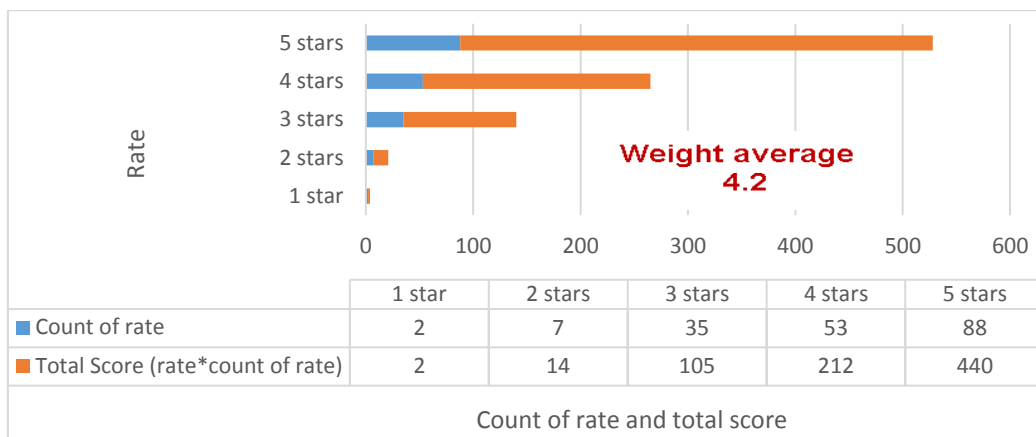
Figure 5.14 Rating Score of Fitness Park Reviews

From figure 5.14 we can see the count of rate and total score rating by user's online reviews evaluation. The total of reviews is 185.The blue bar color is count of rate from users, the orange bar color is total score after calculated with number of rate with weight of rate evaluation (star score). 88 reviewers gave rating with 5 stars, 53 reviewers gave rating 4 stars, 35 reviewers gave rating 3 stars, 7 reviewers gave rating 2 stars, and 2 reviewers gave rating 1 star. The weight average is 4.2 out of 5.0. Based on the score weight average, Fitness Park with predicate by rating weight of score is "Very good" rating.

5.5.6 Rating Evaluation of Jomblo Park Reviews

	1 star	2 stars	3 stars	4 stars	5 stars
■ Count of rate	17	66	120	193	235
■ Total Score (rate*count of rate)	17	132	360	772	1175
Count of rate and total score					
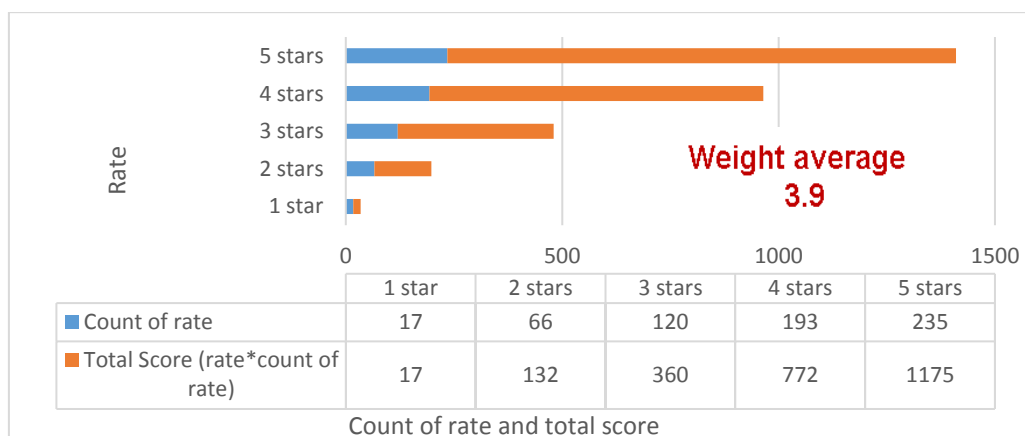
Figure 5.15 Rating Score of Jomblo Park Reviews

From figure 5.15 we can see the count of rate and total score rating by user's online reviews evaluation. The total of reviews is 631.The blue bar color is count of rate from users, the orange bar color is total score after calculated with number of rate with weight of rate evaluation (star score). 235 reviewers gave rating with 5 stars, 193 reviewers gave rating 4 stars, 120 reviewers gave rating 3 stars, 66 reviewers gave rating 2 stars, and 17 reviewers gave rating 1 star. The weight average is 3.9 out of 5.0. Based on the score weight average, Jomblo Park with predicate by rating weight of score is "Average" rating

5.5.7 Rating Evaluation of Film Park Reviews

	1 star	2 stars	3 stars	4 stars	5 stars
Count of rate	12	20	106	213	359
Total Score (rate*count of rate)	12	40	318	852	1795

Count of rate and total score
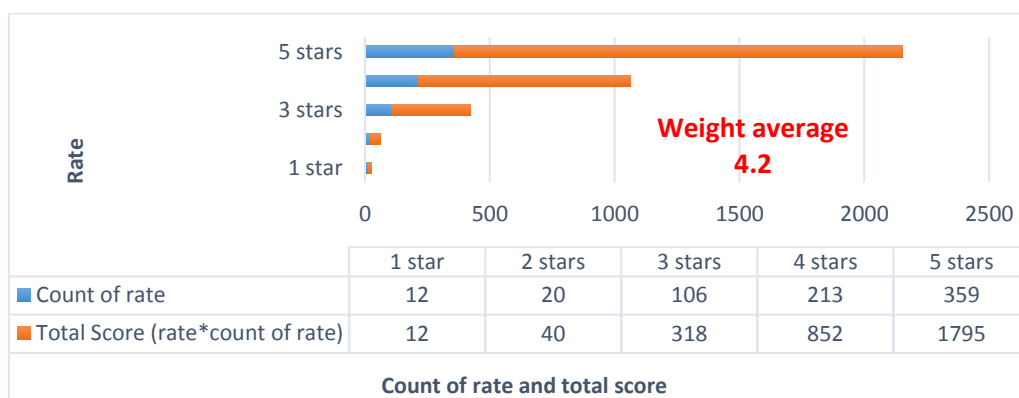
Figure 5.16 Rating Score of Film Park Reviews

From figure 5.16 we can see the count of rate and total score rating by user's online reviews evaluation. The total of reviews is 710.The blue bar color is count of rate from users, the orange bar color is total score after calculated with number of rate with weight of rate evaluation (star score). 359 reviewers gave rating with 5 stars, 213 reviewers gave rating 4 stars, 106 reviewers gave rating 3 stars, 20 reviewers gave rating 2 stars, and 12 reviewers gave rating 1 star. The weight average is 4.2 out of 5.0. Based on the score weight average, Film Park with predicate by rating weight of score is "Very good" rating.

5.5.8 Rating Evaluation of Lansia Park Reviews

	1 star	2 stars	3 stars	4 stars	5 stars
Count of rate	58	49	172	422	710
Total Score (rate*count of rate)	58	98	516	1688	3550

Count of rate and total score
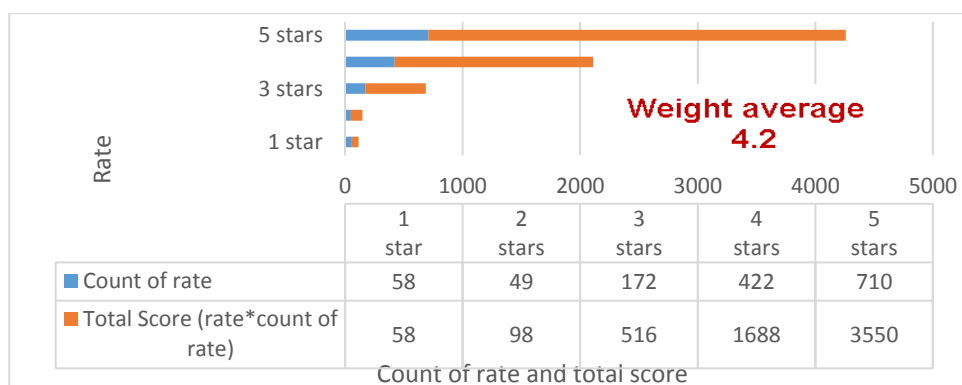
Figure 5.17 Rating Score of Lansia Park Reviews

From figure 5.17 we can see the count of rate and total score rating by user's online reviews evaluation. The total of reviews is 1411.The blue bar color is count of rate from users, the orange bar color is total score after calculated with number of rate with weight of rate evaluation (star score). 710 reviewers gave rating with 5 stars, 422 reviewers gave rating 4 stars, 172 reviewers gave rating 3 stars, 49 reviewers gave rating 2 stars, and 58 reviewers gave rating 1 star. The weight average is 4.2 out of 5.0. Based on the score weight average, Lansia Park with predicate by rating weight of score is "Very good" rating.

5.5.9 Rating Evaluation of Pet Park Reviews

	1 star	2 stars	3 stars	4 stars	5 stars
■ Count of rate	7	9	44	53	89
■ Total Score (rate*count of rate)	7	18	132	212	445
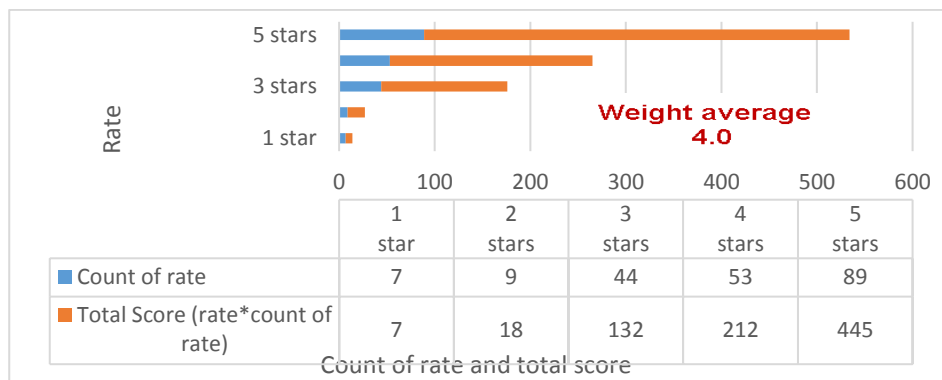
Figure 5.18 Rating Score of Pet Park Reviews

From figure 5.18 we can see the count of rate and total score rating by user's online reviews evaluation. The total of reviews is 202.The blue bar color is count of rate from users, the orange bar color is total score after calculated with number of rate with weight of rate evaluation (star score). 89 reviewers gave rating with 5 stars, 53 reviewers gave rating 4 stars, 44 reviewers gave rating 3 stars, 9 reviewers gave rating 2 stars, and 7 reviewers gave rating 1 star. The weight average is 4.2 out of 5.0. Based on the score weight average, Pet Park with predicate by rating weight of score is "Very good" rating.

5.5.10 Rating Evaluation of Inclusion Park Reviews

	1 star	2 stars	3 stars	4 stars	5 stars
■ Count of rate	1	0	7	8	14
■ Total Score (rate*count of rate)	1	0	21	32	70
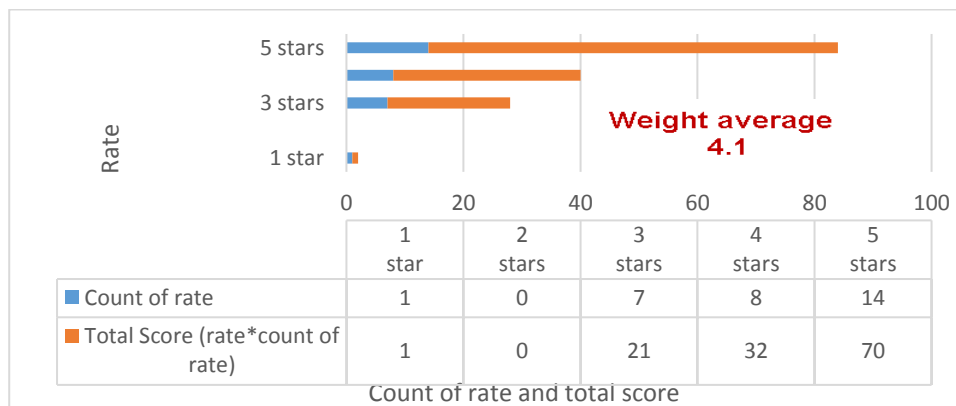
Figure 5.19 Rating Score of Inclusion Park Reviews

From figure 5.19 we can see the count of rate and total score rating by user's online reviews evaluation. The total of reviews is 30.The blue bar color is count of rate from users, the orange bar color is total score after calculated with number of rate with weight of rate evaluation (star score). 14 reviewers gave rating with 5 stars, 8 reviewers gave rating 4 stars, 7 reviewers gave rating 3 stars, 0 reviewers gave rating 2 stars, and 1 reviewers gave rating 1 star. The weight average is 4.2 out of 5.0. Based on the score weight average, Inclusion Park with predicate by rating weight of score is "Very good" rating.

5.5.11 Rating Average of Thematic Parks

The average of rating score 10 thematic parks shown in figure 5.20 below
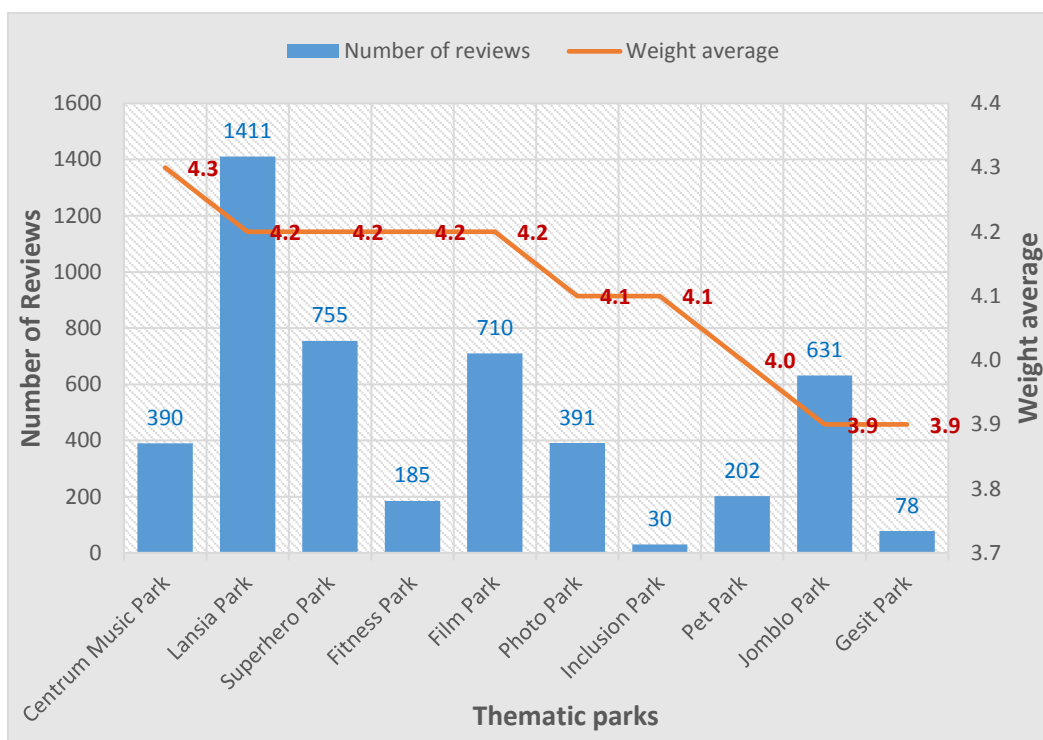
Figure 5.20 Statistics of Rating Average and Number of Reviews 10 Thematic Parks

The rating distribution of the review summary shows that there are 10 thematic parks with very good ratings (average score: 4.1 out of 5.0). Figure 5.20 shows that the number of reviews can affect the rating of the brand. The orange line color is the weight average score of reviews, the blue bar color is the number of reviews. Centrum Music Park is the stronger rating from 10 thematic parks, and Jomblo Park and Gesit Park is the park with the lowest score predicate is "average". The greater the number of reviews will provide better information about the rating of a brand. A good rating affects the user to visit the park and be taken into consideration before visiting the place. The effectiveness of branding can be measured from the ratings obtained and the influence of brands on users based on their opinions.

5.6 Section Conclusion

This chapter confirms the capacity to use rating of online reviews to evaluation effectiveness of branding strategies. We found that thematic parks are effective for the place branding of a city. The large distinction in the number of the reviewers between thematic parks and normal parks can be interpreted that the thematic parks are more attractive than the other ones. Indeed, this reviews would also increase their popularity implicating on the increase number of visitors. This is definitely in line with the main function of city parks as public spaces and community activity centers. Moreover, visitors' perception and the ratings of reviews show great promise for assessing urban parks with the thematic concept. Assessments provide an overview of the attractiveness of thematic parks and how they are known to the wider community as a type of place branding for the city of Bandung.

The conclusion of the analysis of online reviews using text mining is that thematic parks have a greater appeal than non-thematic parks. Thematic parks are better known to the public than non-thematic parks. Ratings from thematic parks were shown to be positive with an average rating score is 4.1 out of 5.0, which indicates "very good". The naming of parks according to their theme and uniqueness as a place branding strategy influences visitors to share their experiences and perceptions on online reviews, which can be used as a consideration and reference for visitors who are considering visiting thematic parks. A good review and rating will have a major influence on introducing a place brand that promotes visitors to visit a particular thematic park. Though our research was carefully designed, the conclusions are still subject to some limitations that merit further research attention. This information is expected to be a reference for developing the concept of thematic parks, especially in the city of Bandung, and it can be utilized to design better parks based on the understanding of the users' perceptions and as a benchmark for similar projects.

Online reviews are increasingly important, both to users and service provider, in this case, a city with place branding. More and more visitors are adapting to consult reviews before making any decision to visit a place. The influence of helpfulness ratings may affect readers' initial evaluations of the primary reviewer. People are more likely to pay attention to ratings based on the number of star ratings on a product or place. The influence of the average rating will give the visitor a general picture before going to his destination. A good rating from the park depends on previous visitors feeling when they are in the place. The attractiveness of the park and the comfort of visitors will be one of the assessments that become a benchmark for the good or not. A good impression will give a good judgment, and the assessment of online reviewers will be a reference for others

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Chapter 6. Understanding Reviewers' Opinion of Park

6.1 Introduction

Online reviews for a wide variety of products and services are being created every day by customers to express their opinion about consumed goods and services. The volume of reviews for given entity can often be prohibitive for potential customer who wishes to read all relevant information, compare alternatives, and make an informed decision [1]. This chapter contains how to use data from the reviewers' opinion and expectation to be a tool to determine the perceptions of visitors. Subsequently, this chapter also contain opinions in accordance with visitors' perception

6.2 Text Classification

In this research, Naïve Bayes classification was used for text classification. It is simple and applicable for text classification. Relevant categories were defined by a domain expert. Based on the manual classification of some sample data, an algorithm then analyzed the proportions of data that fall into the previously defined categories. The classification process therefore involves both manual and automated processes. The first step is for a researcher to manually classify randomly selected posts. Posts that are unclear or able to fit into more than one category are skipped during training. When each category has sufficient training posts, the monitor run and the algorithm automatically classifies each further tweet collected by the monitor [2,3, 4]. Then, words approach was used for sentiment analysis. Process stemming is each reviews was stemmed into the group Indonesian words, a match of each word was searched in the lexicon database, scoring Positive and negative matches were summed to define a score of each tweet and polarity: (P-N)/ (P+N), where P=total sum of positive sentiment words; N=total sum of negative sentiment words.

Furthermore, three categories to express sentiments namely positive, negative, and neutral reviews were developed. In chapter 4 we have obtained a classification of positive and negative reviews of the percent of sentiment analysis. Figure 6.1 show the frame work identification of users opinions.
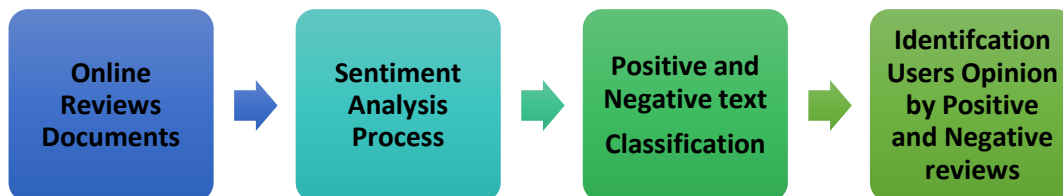
Figure 6.1 Framework Users Opinions

6.3 Model Used in Text Mining

The process to identification of assessments of online reviews text we are using the model text mining, Term Based Method (TBM) and Concept Based Model (CBM).Term in a document means a word which has semantic meaning. In this method the entire set of documents is analyzed on the basis of term. One main disadvantage of this method is the problem of synonymy and polysemy. Synonymy is where multiple words having the same meaning. Polysemy is where a single word has more meanings [5]. Concept Based Method, in this method the document is analyzed based on sentence and document level [6]. In this method there are three main components. The first component examines the meaningful part of the sentences. The second component produces a conceptual ontological graph to explain the structures. The third component extracts top concepts based on the first two components. This method can differentiate between the important and unimportant words.

We used Term Frequency-Inverse Documents Frequency (TF-IDF) to determine the weight of each word that is widely used in information search and text mining research. This weight is a statistical measure used to evaluate how important a word is to a document in a collection or corpus. The importance increases proportionally to the number of times a word appears in the document but is offset by the frequency of the word in the corpus [7]. Variations of the TF-IDF weighting scheme are often used by search engines as a central tool in scoring and ranking a document's relevance given a user query. One of the simplest ranking functions is computed by summing the TF-IDF for each query term; many more sophisticated ranking functions are variants of this simple model. TF-IDF can be successfully used for stop-words filtering in various subject fields including text summarization and classification.

- TF: Term Frequency, which measures how frequently a term occurs in a document. Since every document is different in length, it is possible that a term would appear much more times in long documents than shorter ones. Thus, the term frequency is often divided by the document length (the total number of terms in the document) as a way of normalization:

  TF (t) = (Number of times term t appears in a document) / (Total number of terms in the document).

- IDF: Inverse Document Frequency, which measures how important a term is. While computing TF, all terms are considered equally important. However it is known that certain terms, such as "is", "of", and "that", may appear a lot of times but have little importance. Thus we need to weigh down the frequent terms while scale up the rare ones, by computing the following:

  IDF (t) = log_e (Total number of documents / Number of documents with term t in it).
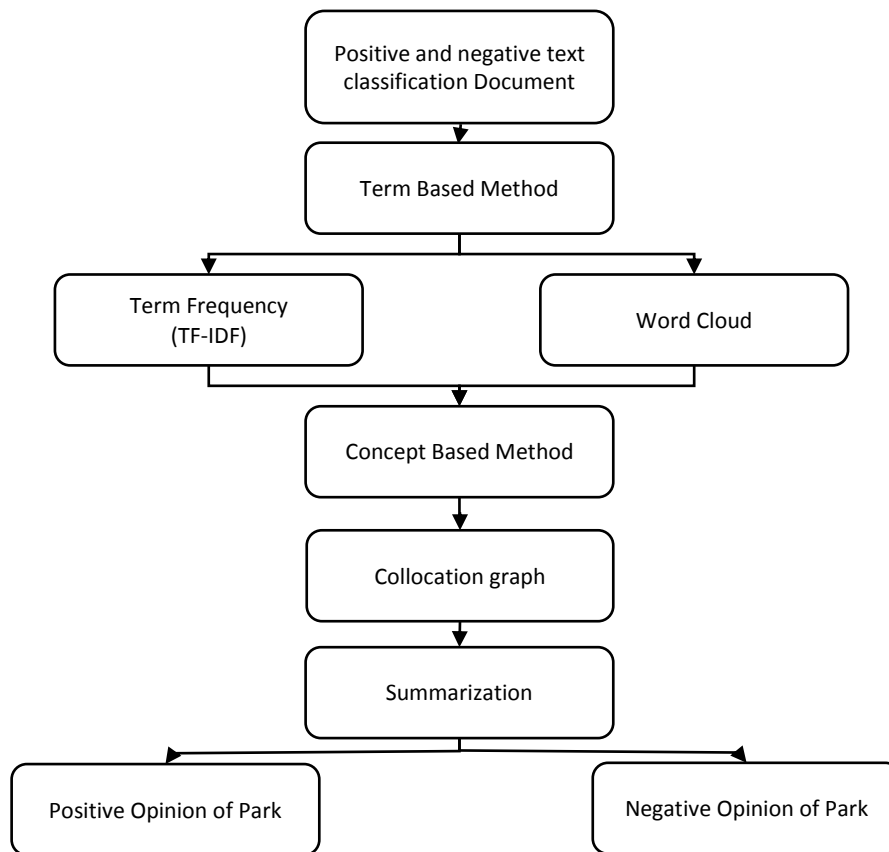
Figure 6.2 Flowchart Diagram System of Opinion Identification

1. We collected opinion with 2 classification, positive reviews and negative reviews documents.
2. Model text analysis using Voyant tools app.

   Voyant tools using for text analysis. Voyant is a free, online text-analysis program. Its tools allow you to generate a word cloud of most frequent words, generate graphs of word frequency across the corpus, and compare multiple documents.
3. The first step in the process of data mining is information retrieval. This step involves the help of a search engine to find out the collection of text also known as corpus of text which might need some conversion. Natural language processing, this step allows the system to performant grammatical analysis of a sentence to read the text. It also analyzes the text in structures. Information extraction, this is the second stage where in order to identify the meaning of a particular text mark-up is done. In this stage a metadata is added to the database about the text. It also involves adding names or location to the text. This step lets the search engine to get information and find out the relationships between the texts using their metadata.
4. Term Based Method, term in a document means has semantic meaning. In this method the entire set of documents is analyzed on the basis of term. In this process we collated the frequency of

term and make word cloud graph. Word cloud using for visually interpret text and useful in quickly gaining insight into most prominent items in a given text.

5. Concept Based Method, this process to find out relation each term. From the relation of term we can calculate the summarization of text.

6. The last stage is result of opinions. We decided to opinion positive and negative.

6.4 Analysis and Result Opinion of Park Reviewers'

A sentiment classifier was developed in order to assess the visitor perception of the online reviews and opinion of park. Ten parks with thematic concept were selected as study sites. From the sentiment analysis, two categories which are positive opinion and negative opinion were generated. Overall opinion each park are explained below.

6.4.1 User's Perceptions of Superhero Park

Figure 6.3 show the distribution of keywords opinion of Superhero Park. After filtering we took 20 terms with frequency of occurrence more than 10 times. Total of positive reviews is 609 and 89 negative reviews.
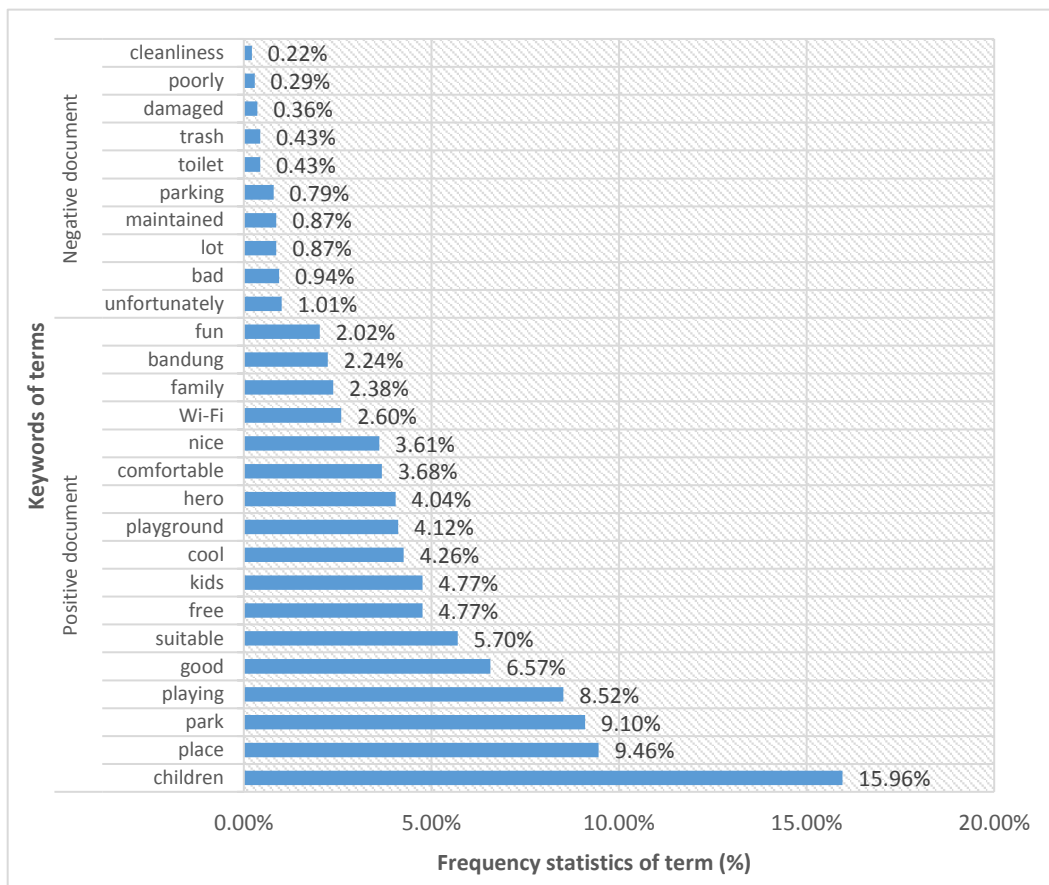
Figure 6.3 Distribution Keywords of Term Opinion Superhero Park Reviews

From the document of positive and negative opinion sentiment, we calculate the frequency of occurrence of keywords from the positive opinion, and the frequency of occurrence of keywords from negative opinions. From those keywords that will be used to summarize user opinions about the park. The keywords of positive opinion are 20 keywords, where the keywords of the children with the largest frequency of occurrence. In negative opinion there are 8 keywords based on appearance. Unfortunately keywords become a word that often appears. Based on these keywords will be used to determine the relationship of each word to summarize all existing opinions.

Positive document classification   Negative document classification

Figure 6.4 Word Cloud of Superhero Park Reviews

Figure 6.4 shows the visualization dominant term interpret text and useful in quickly gaining insight into most prominent items in a given text. Based on the visuals of the text, dominant keywords will be displayed more prominently with larger text sizes. It can be seen that the text "children" with a text size that is larger than the other texts, shows that the word children is a word that often appears or is dominant. Like keeping on a negative document "unfortunately" is the keyword that appears most often in negative reviews

Positive opinion document   Negative opinion document

Figure 6.5 Collocation Graph of Opinion Superhero Park Reviews

Figure 6.5 show the concept of sentence, link of term with another term in a sentence. Collocates Graph represents keywords and terms that occur in close proximity as a force directed network graph. This represents a network graph where keywords in blue are shown linked to collocate in orange. Form the concepts based model we got the summary users perceptions of Superhero Park are Superhero Park is a place that is good, suitable, and comfortable for children and family. It has a playground and free Wi-Fi facilities. But the problem is poorly maintained and cleanliness. Parking is not free, and toilet facility is not work or locked.

The summary shows that Superhero Park gets a very good appraisal from visitors even though there is a lack of negative opinion. From these results, it become an evaluation material for what is the attraction and what must be improve in the future. For example, the condition of park is poorly maintained, this can be an input in improving the quality of the park in the future.

6.4.2 User's Perceptions of Centrum Music Park

Figure 6.6 shows the distribution of keywords opinion of Centrum Music Park.
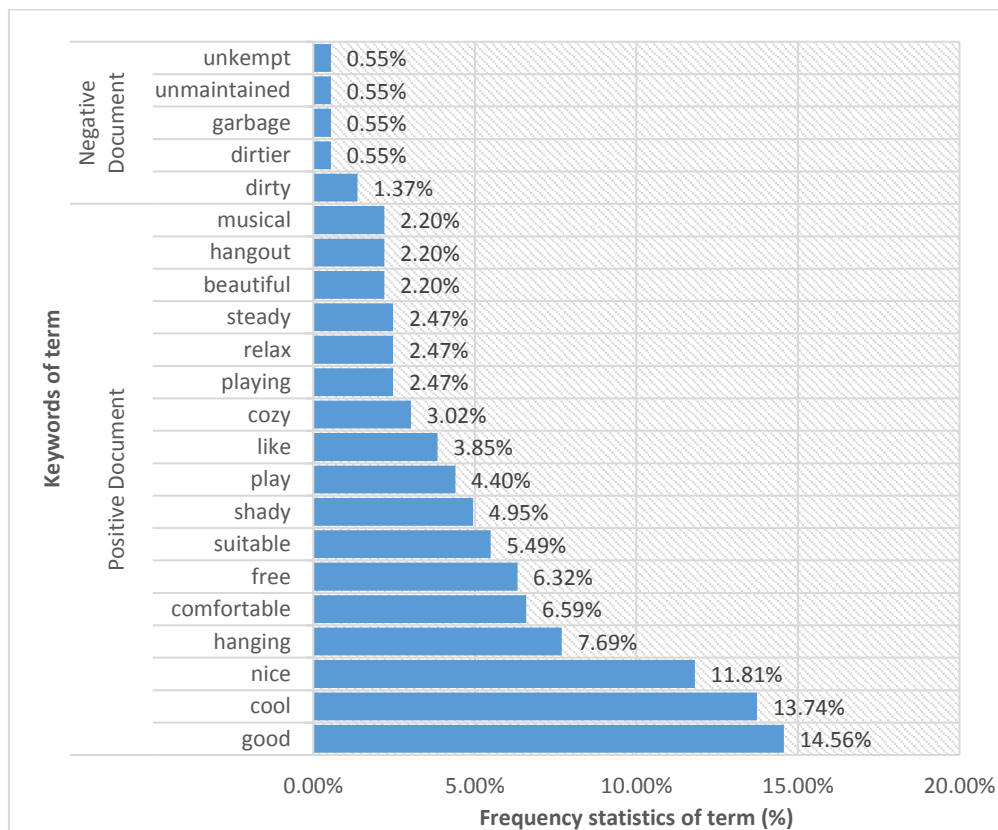
Figure 6.6 Distribution Keywords of Term Opinion Centrum Music Park Reviews

Based on frequency of appearance of keywords from positive opinions. The keywords "good", "cool", and "nice" are words with the most frequency. Keywords "dirty" in the negative opinion with the most frequency. Based on the concept of the model, a summary of the relationships between keywords is

found that the conclusions of the user's opinion of the Centrum Music Park are good parks, comfortable, free, shady and suitable for hangout, playing and relaxing. While the conclusions obtained from the negative opinion are that the park is unmaintained and the problem is cleanliness. From the result frequency of positive words more dominant than negative words. This shows that the Centrum Music Park gets a very good appraisal from visitors even though there is a lack of negative opinion. From these results, a negative opinion is a reference to improve the quality of park cleanliness, where some visitor opinions complain about cleanliness and garbage problem.

6.4.3   User's Perceptions of Photo Park

Figure 6.7 shows the distribution of keywords opinion of Photo Park.
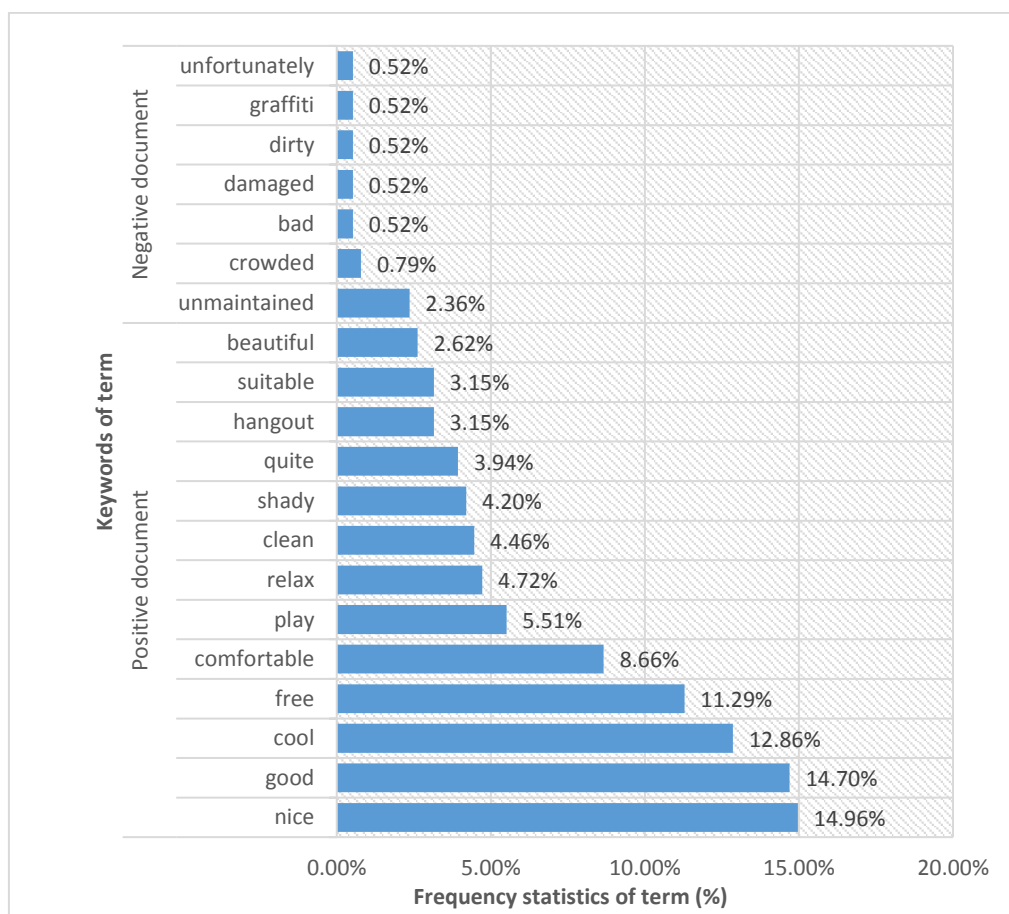
Figure 6.7 Distribution Keywords of Term Opinion Photo Park Reviews

Based on frequency of appearance of keywords from positive opinions. The keyword "nice" is word with the most frequency. Keywords "unmaintained" in the negative opinion with the most frequency. Based on the concept of the model, a summary of the relationships between keywords is found that the conclusions of the user's opinion of the Photo Park are good, comfortable, free, shady and suitable for hangout, playing and relaxing. While the conclusions obtained from the negative opinion, the park

unmaintained both from facility and from the clearness of the park. From the result, assessments of Photo Park, frequency of positive words more dominant than negative words. This shows that the Photo Park gets a very good appraisal from visitors even though there is a lack of negative opinion. From these results, a negative assessment is a reference to improve the quality of park.

6.4.4 User's Perceptions of Gesit Park

Figure 6.8 shows the distribution of keywords opinion of Gesit Park.
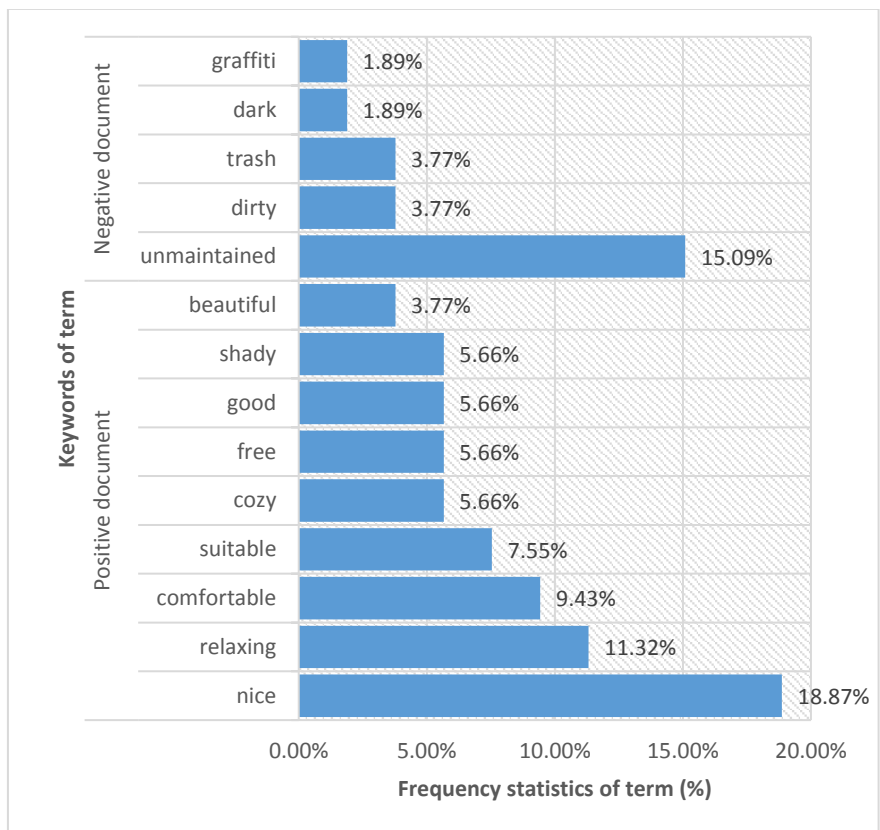
Figure 6.8 Distribution Keywords of Term Opinion Gesit Park Reviews

Based on frequency of appearance of keywords from positive opinions. The keyword "nice" is word with the most frequency. Keywords "unmaintained" in the negative opinion with the most frequency. Based on the concept of the model, a summary of the relationships between keywords is found that the conclusions of the user's opinion of the Gesit Park are nice park, comfortable, free, shady, good, beautiful, and suitable for relaxing. While the conclusions obtained from the negative opinion, the problem is unmaintained. From the result of assessments of Gesit Park, frequency of positive words more dominant than negative words. This shows that Gesit Park gets a very good appraisal from visitors even though there is a lack of negative opinion. From these results, a negative opinion is a reference to improve the quality of park cleanliness, where some visitor opinions complain about cleanliness and garbage problem, and facility of lighting.

6.4.5 User's Perceptions of Fitness Park

Figure 6.9 shows the distribution of keywords opinion of Fitness Park.
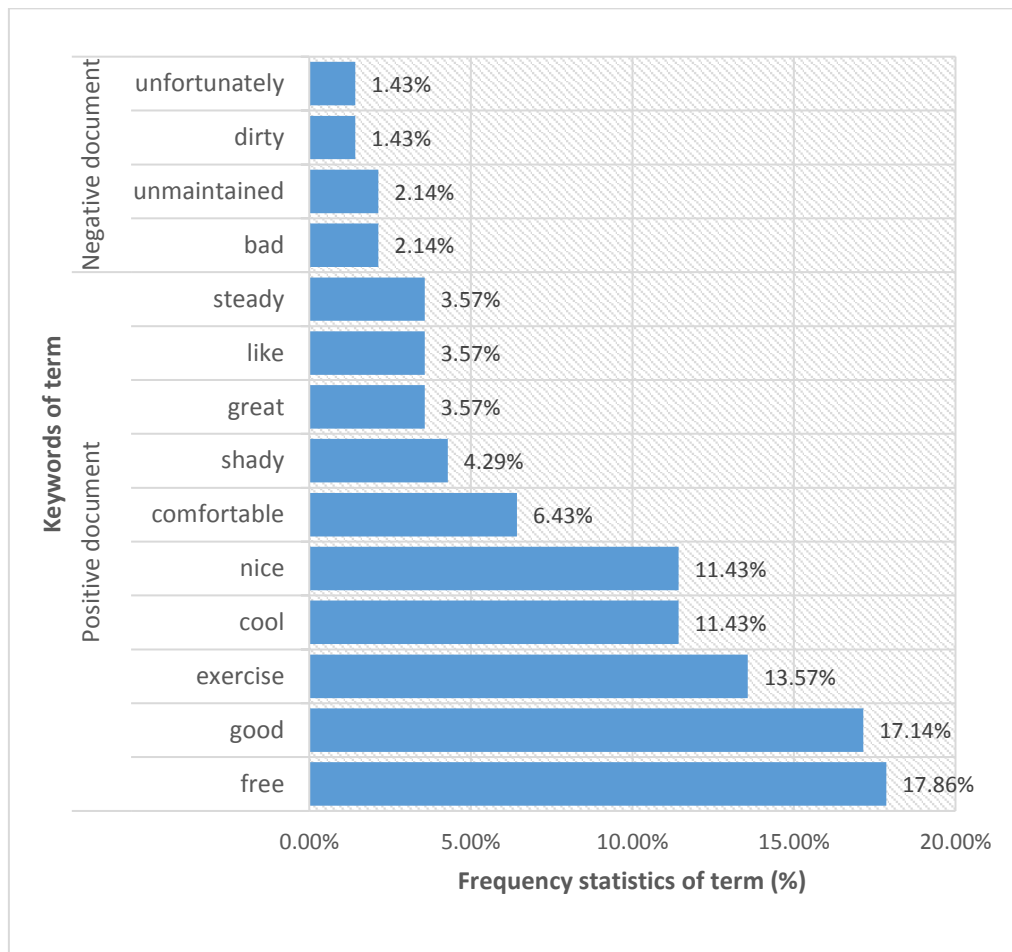
Figure 6.9 Distribution Keywords of Term Opinion Fitness Park Reviews

Based on frequency of appearance of keywords from positive opinions. The keywords "free", and "good" are words with the most frequency. Keywords "bad" and "unmaintained" in the negative opinion with the most frequency. Based on the concept of the model, a summary of the relationships between keywords is found that the conclusions of the user's opinion of the Fitness Park are great, nice, cool, good, and comfortable for doing exercise. While the conclusions obtained from the negative opinion, the problem is unmaintained. From the result of assessments of Fitness Park, frequency of positive words more dominant than negative words. This shows that Fitness Park gets a very good appraisal from visitors even though there is a lack of negative opinion. From these results, a negative opinion is a reference to improve the quality of park cleanliness, where some visitor opinions complain about cleanliness and garbage problem.

6.4.6 User's Perceptions of Jomblo Park

Figure 6.10 shows the distribution of keywords opinion of Jomblo Park.
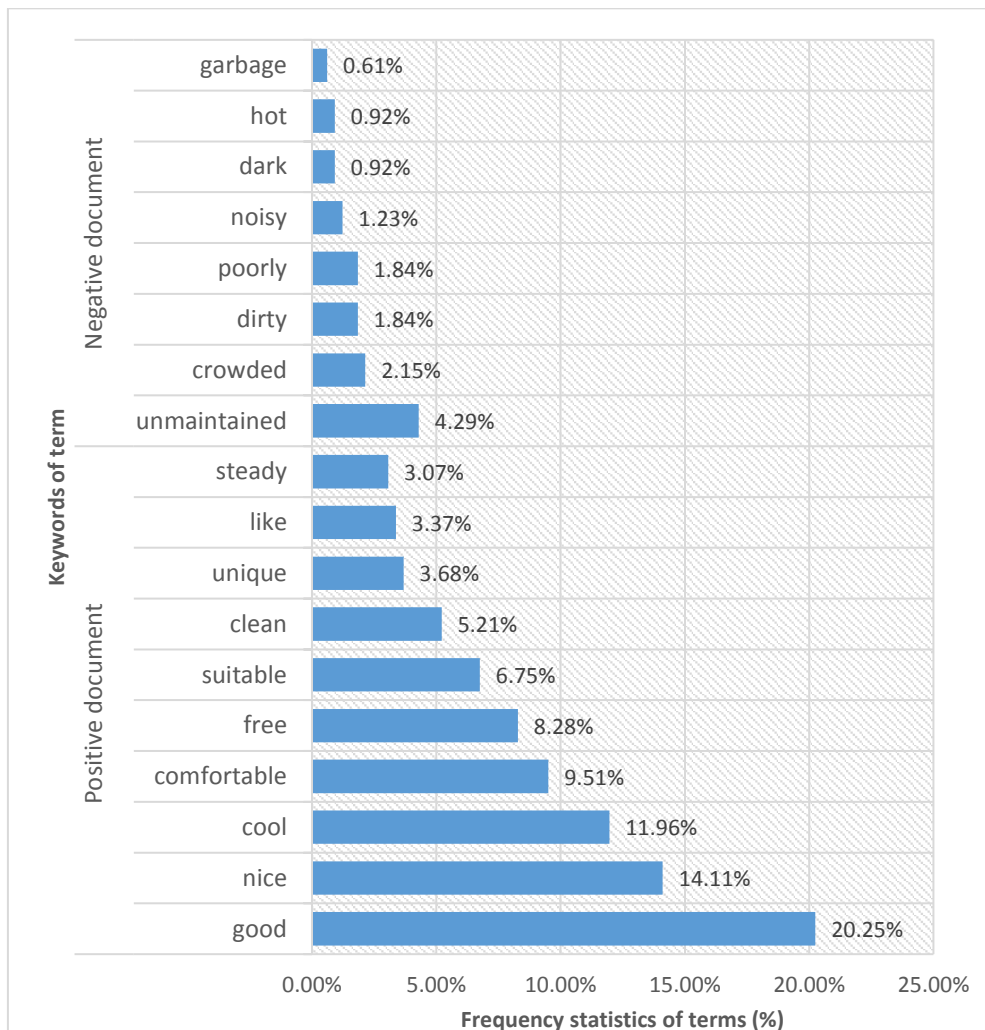
Figure 6.10 Distribution Keywords of Term Opinion Jomblo Park Reviews

Based on frequency of appearance of keywords from positive opinions. The keyword "good" is word with the most frequency. Keyword "unmaintained" in the negative opinion with the most frequency. Based on the concept of the model, a summary of the relationships between keywords is found that the conclusions of the user's opinion of the Jomblo Park are good, nice, cool, comfortable, free, suitable, clean, and unique. While the conclusions obtained from the negative opinion, the problem is unmaintained. From the result of assessments of Jomblo Park, frequency of positive words more dominant than negative words. This shows that Jomblo Park gets a very good appraisal from visitors even though there is a lack of negative opinion. From these results, a negative opinion is a reference to improve the quality of park cleanliness, where some visitor opinions complain about maintenance, cleanliness, lighting, and noisy.

6.4.7 User's Perceptions of Film Park

Figure 6.11 shows the distribution of keywords opinion of Film Park.
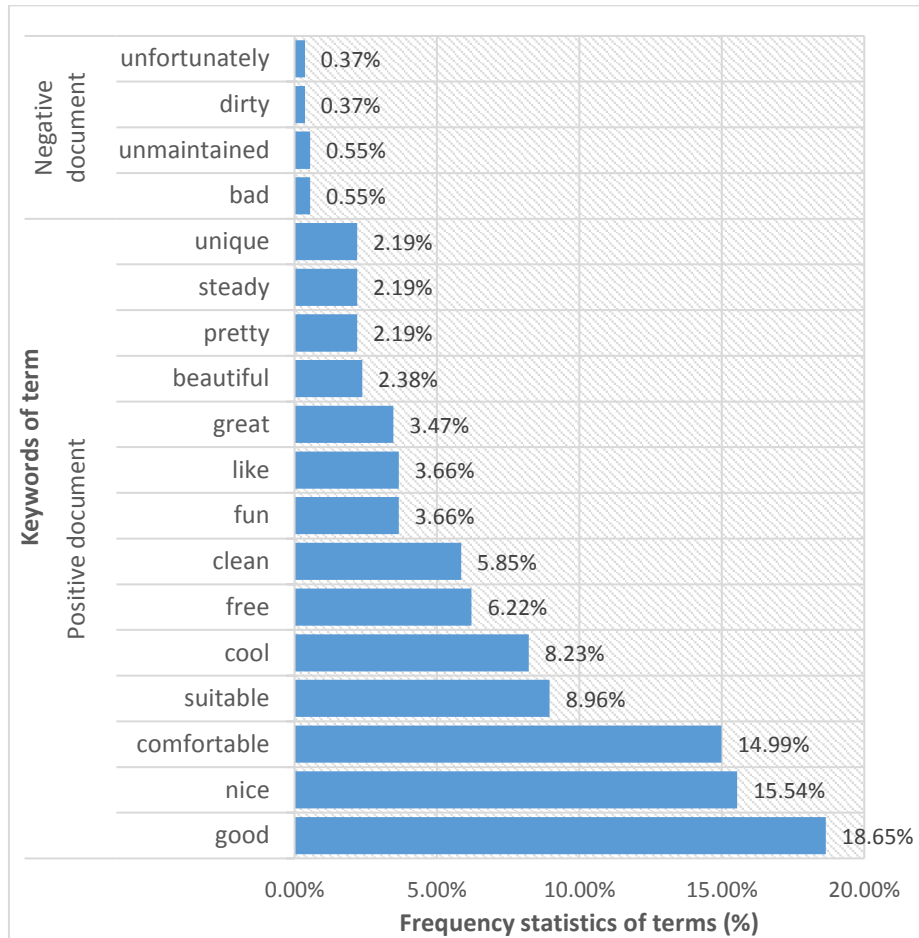
Figure 6.11 Distribution Keywords of Term Opinion Film Park Reviews

Based on frequency of appearance of keywords from positive opinions. The keywords "good", "nice", and "comfortable" are words with the most frequency. Keywords "bad" and "unmaintained" in the negative opinion with the most frequency. Based on the concept of the model, a summary of the relationships between keywords is found that the conclusions of the user's opinion of the Film Park are good, nice, cool, comfortable, free, suitable, clean, and unique. While the conclusions obtained from the negative opinion, the problem is unmaintained. From the result of assessments of Film Park, frequency of positive words more dominant than negative words. This shows that Film Park gets a very good appraisal from visitors even though there is a lack of negative opinion. From these results, a negative opinion is a reference to improve the quality of park cleanliness, where some visitor opinions complain about maintenance and cleanliness.

6.4.8 User's Perceptions of Lansia Park

Figure 6.12 shows the distribution of keywords opinion of Lansia Park.
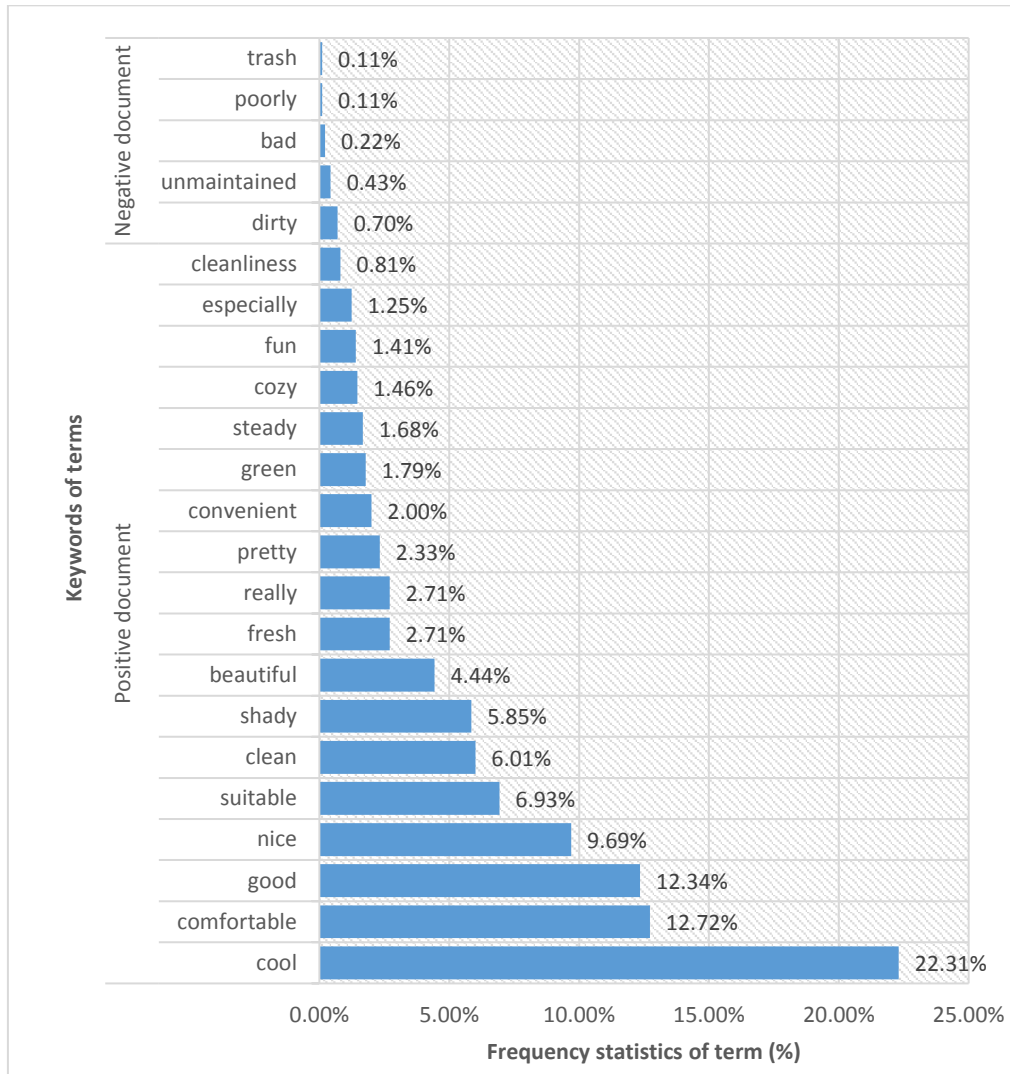
Figure 6.12 Distribution Keywords of Term Opinion Lansia Park Reviews

Based on frequency of appearance of keywords from positive opinions. The keyword "cool" is word with the most frequency. Keyword "dirty" in the negative opinion with the most frequency. Based on the concept of the model, a summary of the relationships between keywords is found that the conclusions of the user's opinion of the Lansia Park are green places, beautiful, nicem comfortable, shady, and clean. While the conclusions obtained from the negative opinion, the problem is unmaintained. From the result of assessments of Lansia Park, frequency of positive words more dominant than negative words. This shows that Lansia Park gets a very good appraisal from visitors even though there is a lack of negative opinion. From these results, a negative reviews is a reference to improve the quality of park, "cleanliness", and "unmaintained" some of the problem in the park.

6.4.9 User's Perceptions of Pet Park

Figure 6.13 shows the distribution of keywords opinion of Pet Park.
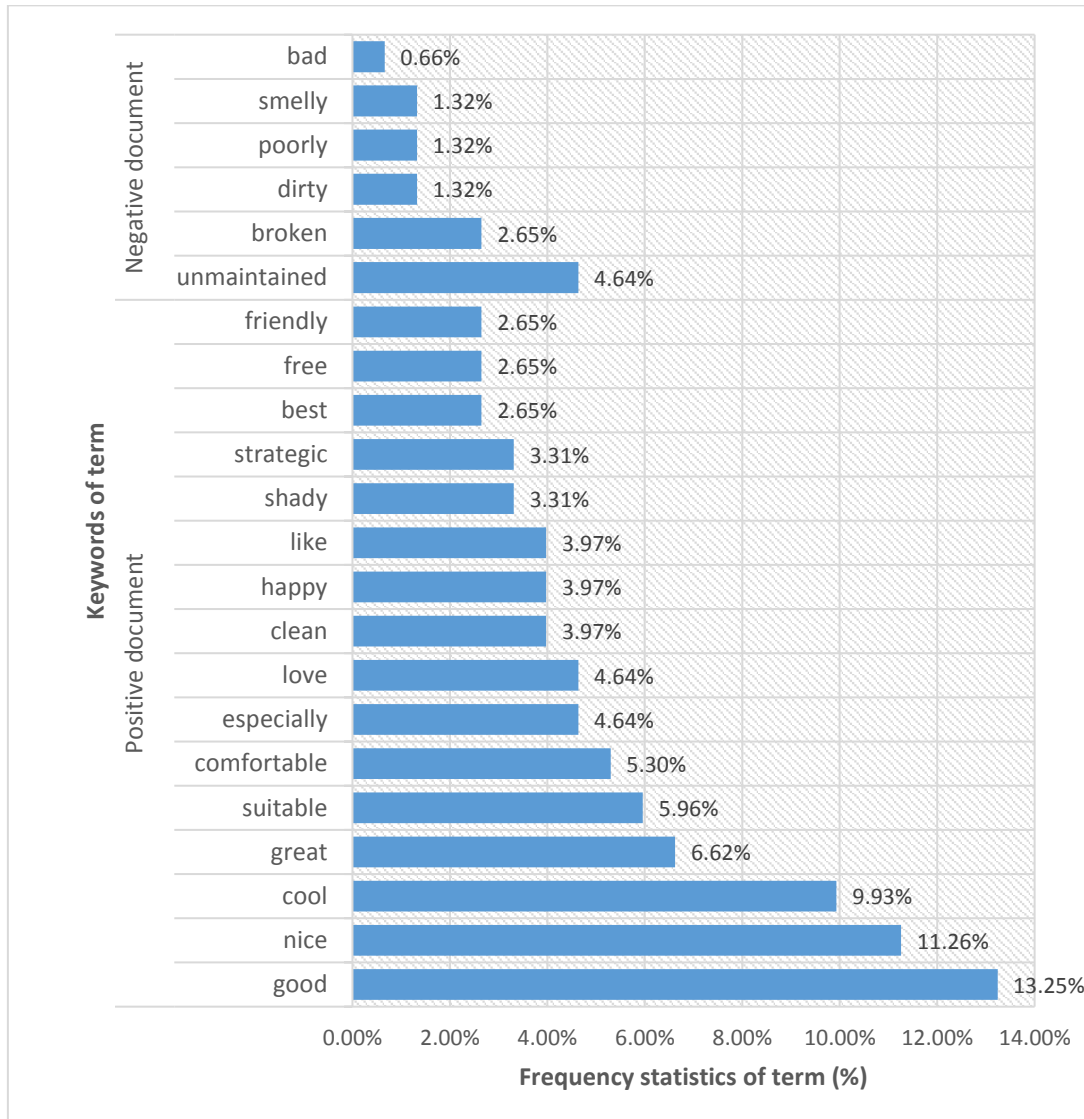
Figure 6.13 Distribution Keywords of Term Opinion Pet Park Reviews

Based on frequency of appearance of keywords from positive opinions. The keyword "good" is word with the most frequency. Keyword "unmaintained" in the negative opinion with the most frequency. Based on the concept of the model, a summary of the relationships between keywords is found that the conclusions of the user's opinion of the Pet Park are a good, clean, free, friendly, comfortable, strategic, shady and suitable. While the conclusions obtained from the negative opinion, the problem is unmaintained. From the result of assessments of Pet Park, frequency of positive words more dominant than negative words. This shows that Pet Park gets a very good appraisal from visitors even though there is a lack of negative opinion. From these results, a negative reviews is a reference to improve the quality of park, "cleanliness", and "unmaintained" some of the problem in the park.

6.4.10 User's Perceptions of Inclusion Park

Figure 6.14 shows the distribution of keywords opinion of Inclusion Park.
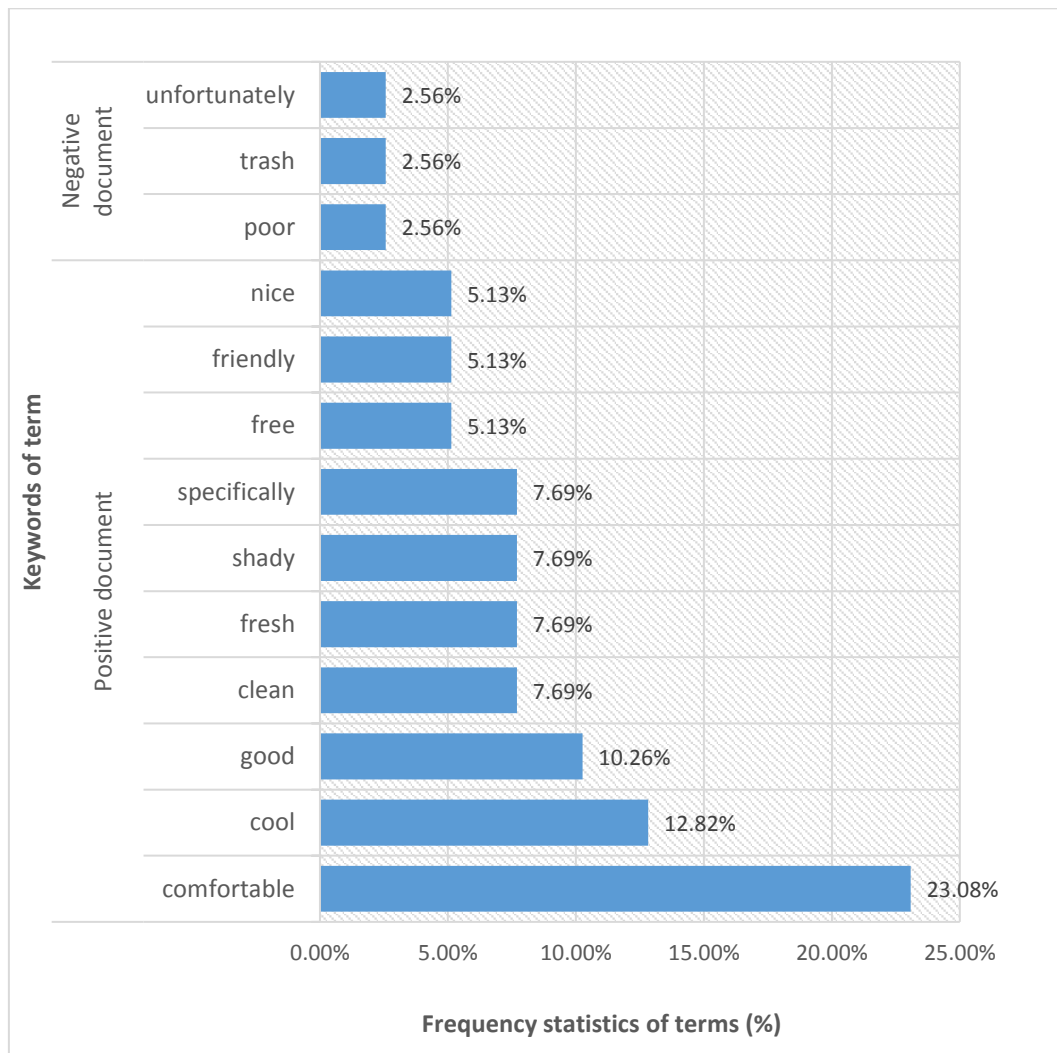
Figure 6.14 Distribution Keywords of Term Opinion Inclusion Park Reviews

Based on frequency of appearance of keywords from positive opinions. The keyword "comfortable" is word with the most frequency. Keywords "poor", "trash", and "unfortunately" in the negative opinion with the most frequency. Based on the concept of the model, a summary of the relationships between keywords is found that the conclusions of the user's opinion of the Inclusion Park are a comfortable, cool, clean, fresh, shady, free, and friendly. While the conclusions obtained from the negative opinion, the problem is unmaintained. From the result of assessments of Inclusion Park, frequency of positive words more dominant than negative words. This shows that Inclusion Park gets a very good appraisal from visitors even though there is a lack of negative opinion. From these results, a negative reviews is a reference to improve the quality of park cleanliness some of the problem in the park.

6.4.11 Summarization of Opinions 10 Thematic Parks Reviews

Figure 6.15 shows the overall positive opinion 10 thematic parks and figure 6.16 show the negative opinion.
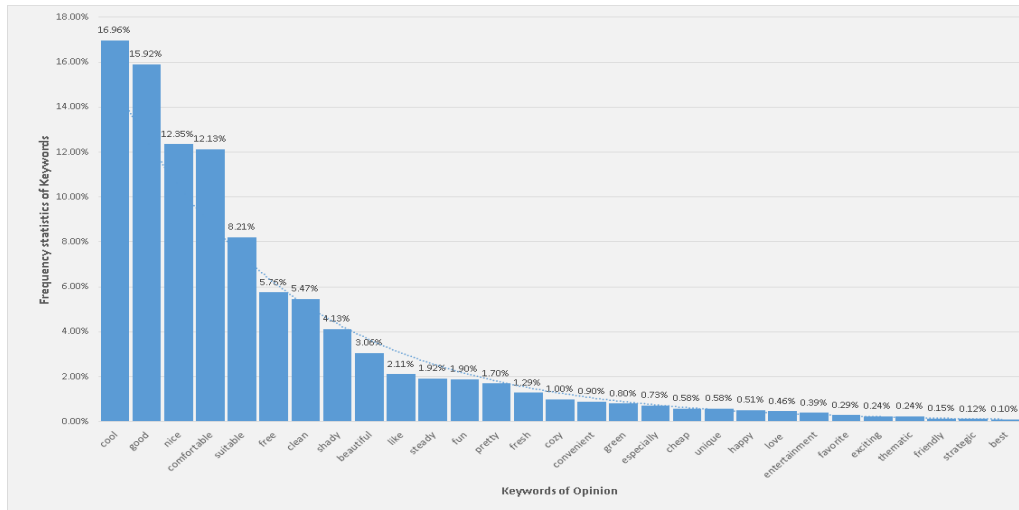
Figure 6.15 Keyword Prioritization Positive Opinion Online Reviews of Thematic Parks

Statistics on visitor's opinion of thematic parks through online reviews show that thematic concept influence the attractiveness of the park. The most frequent keyword appears almost similarly in 10 thematic parks The keyword are cool, good/nice, comfortable, suitable, free, clean, calm and so forth . To conclude, the positive assessment appears in the thematic park based on the visitor's opinion includes keywords of very nice, comfortable, clean and suitable for park users.
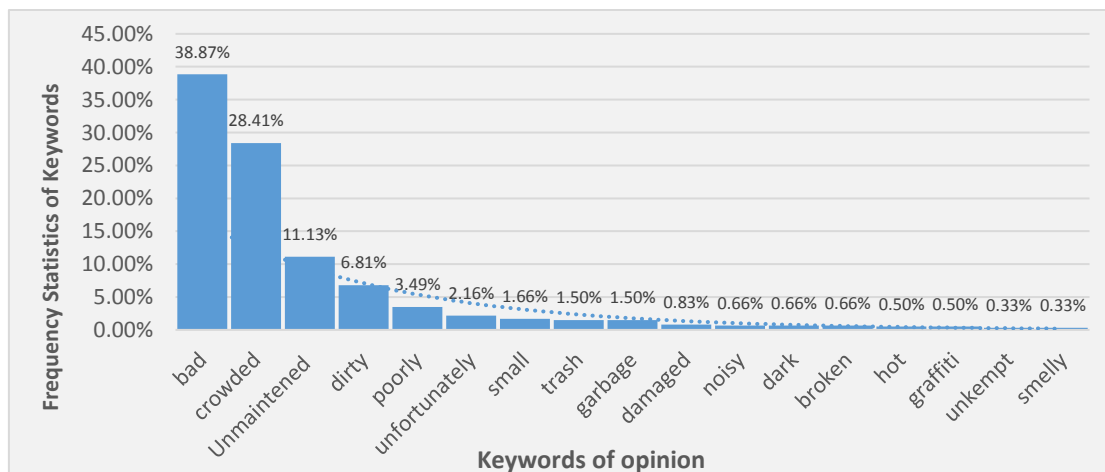
Figure 6.16 Keyword Prioritization Negative Opinion Online Reviews of Thematic Parks

By contrast, the negative opinions, some visitor's perceptions argue that the problem or lack of park are poorly maintained, and park cleanliness problems that were almost the same problem in every park. Based on a summary of opinions visitors by online reviews can provide better information about the attraction and problems that exist in the park. This information will become reference material in the future improvement or development of the park.

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6.5 Section Conclusion

In this chapter we have investigated how users perceptions of the park to evaluation opinions of park. Potential of geo-tagging social network data based on text analysis, as well as offering possible new directions for the research community for city planners. Positive and negative opinions of the park will be a policy determinant in the decision making process for improving and developing the attraction of the park

The availability of information through social networks will facilitate the process of collecting data in the form of opinions from park users. The more review data will provide better evaluation material. Understand the user's perception of the evaluation material to the extent that the brand is accepted by the user from positive or negative opinions. Based on a summary of park opinion that the frequency of positive reviews is more dominant than negative reviews. This shows that the park's assessment is very good from visitors despite negative opinions.

Based on the opinions of reviewers it shows that, on average the opinions of 10 thematic parks which are the object of study have a good impression for reviews. From the frequency statistics the keywords of opinions using text analysis we got the summarization of 10 thematic parks. The summary user's perceptions of Superhero Park are Superhero Park is a place that is good, comfortable, and suitable for children and family. But the problem is poorly maintained and cleanliness. The user's opinion of the Centrum Music Park are good parks, comfortable, free, shady and suitable for hangout, playing and relaxing. While the conclusions obtained from the negative opinion are that the park is unmaintained and the problem is cleanliness. The summary user's perceptions of Photo Park are good, comfortable, shady, and suitable for hangout, playing and relaxing but unmaintained one of the problem of the park. User's perceptions of Gesit Park are nice park, comfortable, free, shady, beautiful, and suitable for relaxing but there are problem with unmaintained. User's perceptions of Fitness Park are good, and comfortable for doing exercise but the problem is unmaintained. Jomblo Park based on users perceptions are good place, cool, comfortable, clean and unique, but the problem is unmaintained. Film Park is a good park, nice, comfortable, clean and unique, the problem is unmaintained. User's Perceptions of Lansia Park are green place, beautiful, nice, comfortable, shady and clean. The problem is unmaintained. Pet Park are a good, friendly, comfortable, strategic, shady and suitable for animal lovers, but the problem is cleanliness and unmaintained. The summary of Inclusion Park users perceptions are comfortable, cool, clean, fresh, shady, and friendly but the problem is unmaintained. From the opinion of user, it can be concluded that the average of 10 thematic parks get good opinions from reviews, but the problem that can be seen from 10 thematic parks are the same, maintenance and cleanliness of the park. From these results, it become an evaluation material for what is the attraction and what must be improve in the future.

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Chapter 7. Confirming Online Reviews on Park Users Perceptions with Field Survey

7.1 Introduction

Public spaces are open to all, regardless of ethnic origin, age or gender, and as such they represent a democratic forum for citizens and society [1]. When properly designed and cared for, they bring communities together, provide meeting places and foster social ties of a kind that have been disappearing in many urban areas. These spaces shape the cultural identity of an area, are part of its unique character and provide a sense of place for local communities. The open spaces near our homes give us a valuable place to interact with our neighbors, whether chatting over the garden fence or meeting in the local park. Gardens and allotments, for example, can provide an especially good community focus and an opportunity for small, personal interactions. On a larger scale, community gardens and city farms bring people together from different ages and cultures, and thus help to create a real sense of neighborhood [2, 3]. However, quality counts; the better the design of the space in question, the better the quality of the social experience. In this regard, it has been found that big, bland spaces on housing estates fail to offer the same opportunities for social cohesion as more personal spaces [4].

The purpose of this chapter is to discuss the result of filed survey to confirm finding attained from online reviews of thematic parks in Bandung city.

7.2 Questionnaire Data Collection

The distribution of the questionnaire in 10 Bandung thematic parks was held in March 2019. The target of the survey was to identify and to confirm finding the online reviews data on Google Maps user reviews (e.g., gender, age, occupation, opinion, etc.). In this part, text analysis is employed to identify visitors' opinions. From this analysis, visitors' perceptions are summarized and conformed to the online reviews data.

The population of the research subjects were the people in the city of Bandung, the population of Bandung is 2.497.938 inhabitants. This kind of population is classified in the category of finite population, so to determine the number of samples that can represent the population can be used Slovin formula quoted [5].

$$n = \frac{N}{1 * N(e)^2}$$

n = Number of Sample

N = Total population

E = Error tolerance

Based on the formula above, the number of sample used in this study with error tolerance = 10% is as follows:

$$n = \frac{2.497.938}{1 + 2.497.938\,(0.1)^2} = \frac{2.497.938}{24.980,38} = 99.996 \approx 100\ respondents$$

There 911 respondents in total from all visitors to thematic parks to collect visitors' opinion directly. In this part, text analysis is employed to identify visitors' opinions. From this analysis, visitors' perceptions are summarized and conformed to the online reviews data. Figure 7.1 shows questionnaire distribution conducted by surveyors.
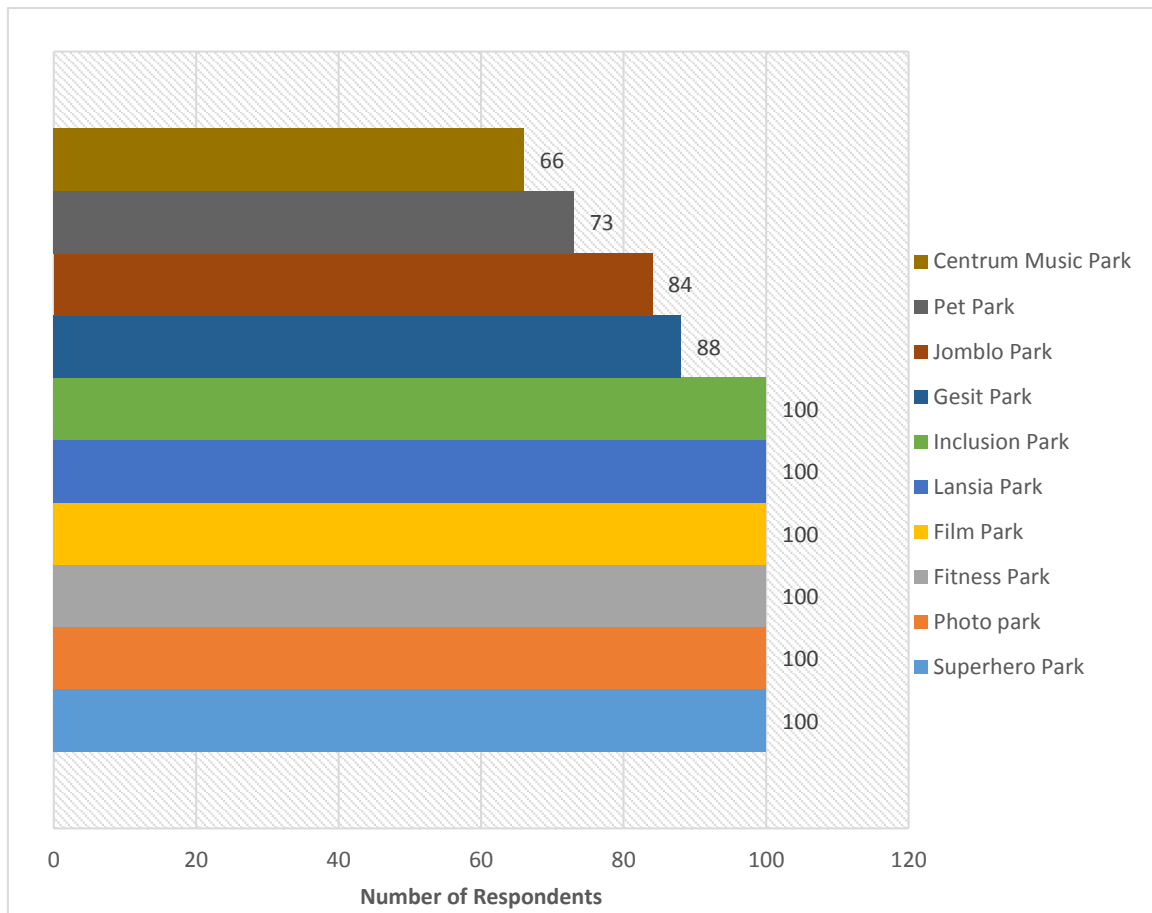
Figure 7.1 The Number of Respondents

Figure 7.2 Questionnaire Distribution

7.3 T-test and Analysis of Variance (ANOVA)

ANOVA and T-test were used to examine the relationship between the variables. According to [6], T-test are called so, because the test results are all based on t-values. A T-test looks at the t-statistic, the t-distribution values, and the degrees of freedom to determine the probability of difference between two sets of data. The following assumptions are made by the statistical tests described in this section. One of the reasons for the popularity of the T-test, particularly the Aspin-Welch Unequal-Variance T-test, is its robustness in the face of assumption violation. However, if an assumption is not met even approximately, the significance levels and the power of the t-test are invalidated. T-values are an example of test statistics. A test statistic is a standardized value that is calculated from sample data during a hypothesis test. The procedure that calculates the test statistic compares your data to what is expected under the null hypothesis.

The One-way Analysis of Variance (ANOVA) is a procedure for testing the hypothesis that K population means are equal, where $K \geq 2$. The One-way ANOVA compares the means of the samples or groups in order to make inferences about the population means. The One-way ANOVA is also called a single factor analysis of variance because there is only one independent variable or factor. The independent variable has nominal levels or a few ordered levels [7].

7.4 Text Analysis Opinion of the Respondents

We using text analysis to analysis the summary of respondent opinion of park. Figure 7.3 shows the process text analysis opinion of respondents.
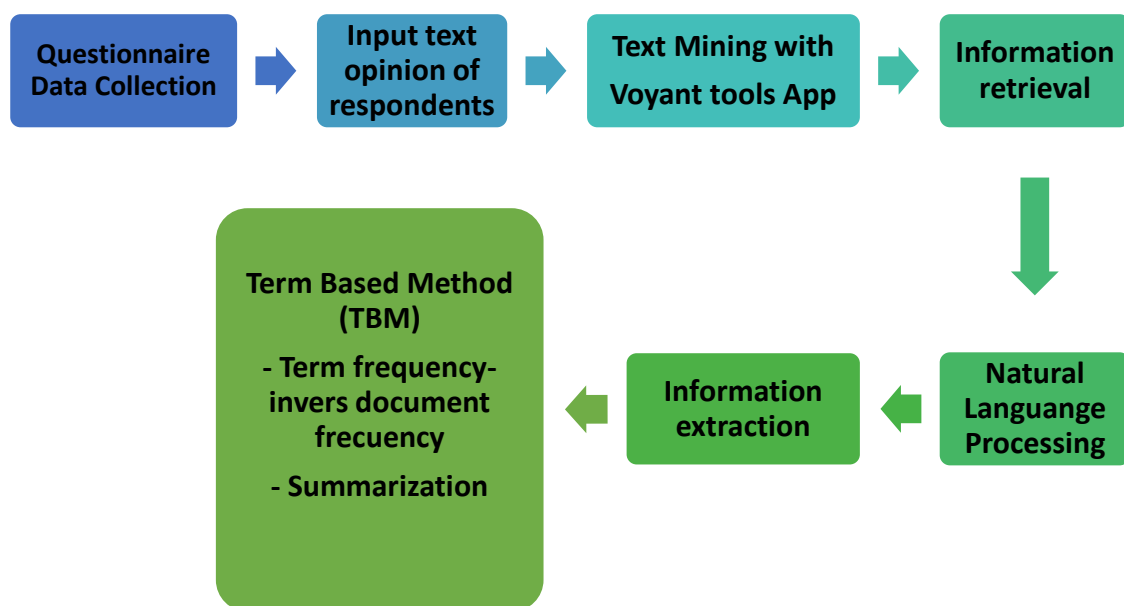
Figure 7.3 Process of Text Analysis of Respondent's Opinion

1. We collected opinion of respondents.
2. Document text opinion uses to text analysis, using Voyant tools app.

    Voyant tools using for text analysis. Voyant is a free, online text-analysis program. Its tools allow you to generate a word cloud of most frequent words, generate graphs of word frequency across the corpus, and compare multiple documents.
3. The first step in the process of data mining is information retrieval. This step involves the help of a search engine to find out the collection of text also known as corpus of text which might need some conversion.
4. Natural language processing, this step allows the system to performant grammatical analysis of a sentence to read the text. It also analyzes the text in structures.
5. Information extraction, this is the second stage where in order to identify the meaning of a particular text mark-up is done. In this stage a metadata is added to the database about the text. It also involves adding names or location to the text. This step lets the search engine to get information and find out the relationships between the texts using their metadata.

The final stage is text mining using different tools. Term based method, term in a document means has semantic meaning. This stage find out term frequency-invers document frequency to get the tf-idf weight. Word cloud using for visually interpret text and useful in quickly gaining insight into the most prominent items in a given text, by visualizing the word frequency in text as a weighted list. The last process is summarization, it helps to highlight major points in a document. If there are some keywords need more detail meaning we use the Contexts (or keywords in context) tool is shows each occurrence of a keyword with a bit of surrounding text (the context). It can be useful for studying more closely how terms are used in different contexts. The table context shows the following three columns by default:

- Document: this is document in which keyword and contexts occur
- Left: contextual words to the left of the keyword (note that sorting by this column treats words in reverse order, right to left from the keyword)
- Term: the keyword matching the default or user-provided term query
- Right: contextual words to the right of the keyword

7.5 Social Characteristics of the Respondents

The social characteristic of respondents were firstly identified and asked to the respondents. The aim of this question is to understand respondents' background. Some personal questions that were asked are gender, age, occupation, and the distance from their house to visited park. There 911 respondents in total from all visitors to thematic parks to collect visitors' opinion directly.

Table 7.2 Overall Socio-Demographic Characteristics.

Socio-Demographic Characteristics	Percentage	Number
Gender		
Male	65.31%	595
Female	34.69%	316
Age		
< 15 years	2.31%	21
15 to 25 years	52.80%	481
26 to 45 years	41.93%	382
>45 years	2.96%	27
Occupation		
Employee	22.83%	208
Entrepreneur	19.32%	176
Service	11.09%	101
Student	38.97%	355
Housewife	7.79%	71
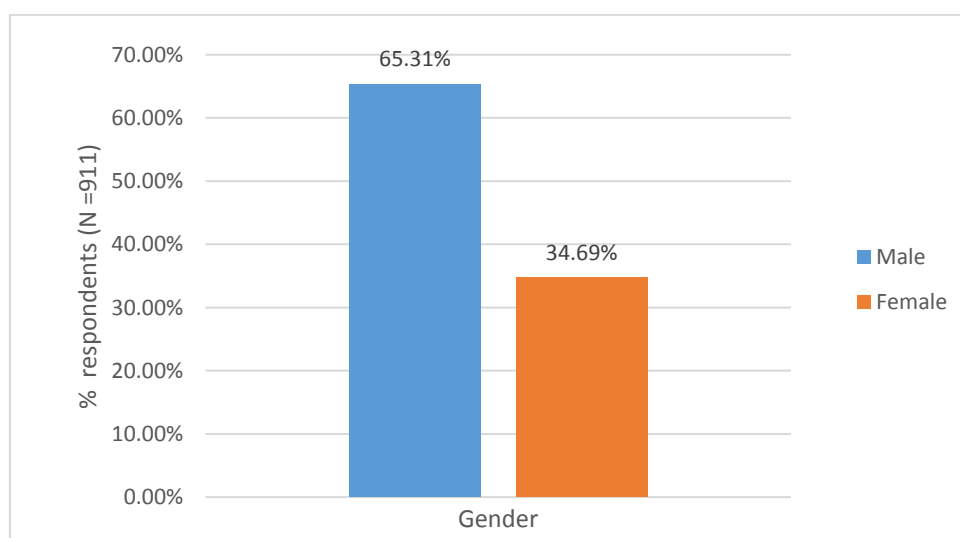
Figure 7.4 Distribution Gender of Respondents

Figure 7.4 show that, most Respondents (N =911) in the survey were male (65.31%; n=595).
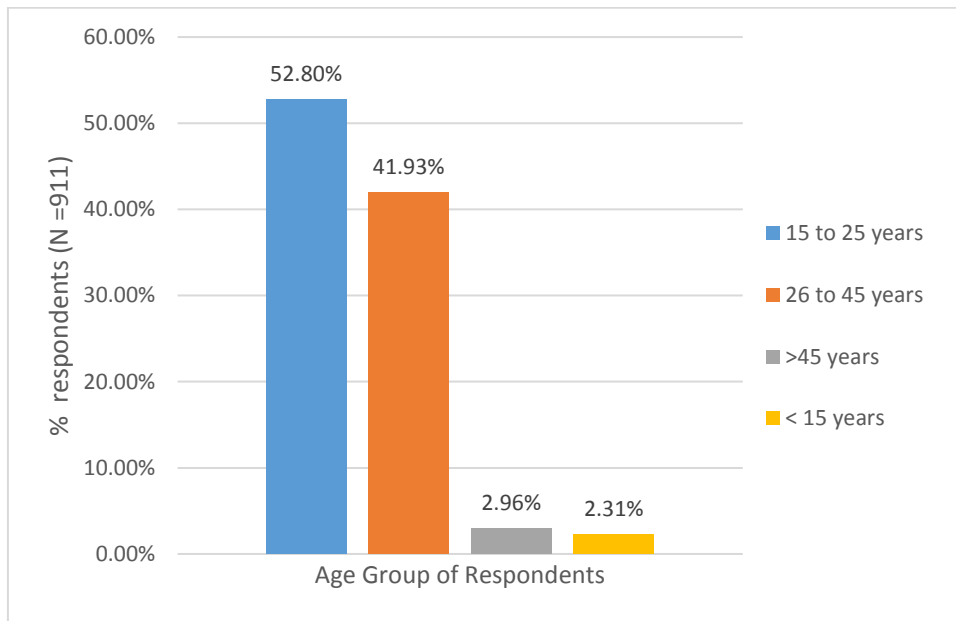
Figure 7.5 Distribution Age Group of Respondents

The greatest (52.80 %; n= 481) number of respondents were between 15 to 25 years old, followed by the age 26 to 45 years old (41.93 %; n= 382), above 45 years old (2.96%; n=27), and less than 15 years old (2.31 %; n=21).
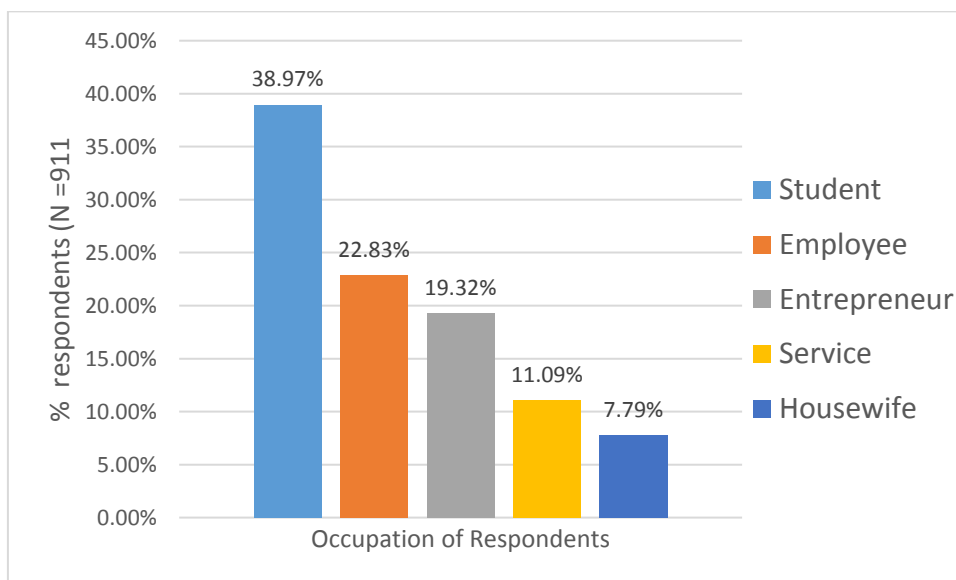
Figure 7.6 Distribution Occupation of Respondents

The greatest (38.97 %; n= 355) number of respondents were student, followed by the occupation employee (22.83%; n=208), entrepreneur (19.32%; n=176), service (11.09%; n=101), and housewife (7.79%; n=71).

7.6 Relation between the Socio-Demographic and Distance to the Surveyed Park

Visitors to the parks have been categories into five categories based on distance from home's residents of respondents to the park. The distances travelled by the respondents to visit the parks with distances less than 1 km, 1km to 2 km, more than 2 km to 3 km, more than 3 km to 5 km, and more than 5 km.
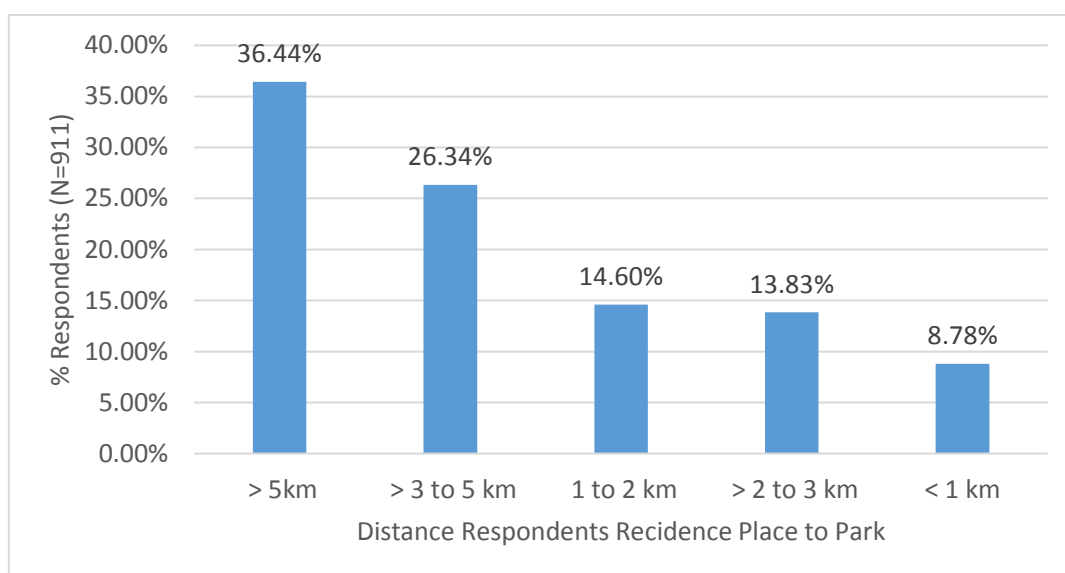
Figure 7.7 Distance of the Surveyed Parks from Visitor's Place

The number of total visitors to the surveyed park tends to increase with the distance of place of residence from the parks. Only 8.78 % of the visitors to the surveyed parks come from a distance of < 1 km, while the majority of the visitors travelled more than 2 km from their place of residence to visit the surveyed parks. Especially, 36.44 % of the visitors travelled more than 5 km (Figure 7.7).There was not much variation in the distance travelled by the respondents to visit the parks from their place residence in terms of age (Table 7.2). However there was significant variation amongst different gender and occupation group. About 57.14 % gender of respondents are male more than 2 km to 3 km from their residence to visit the park (p=0.01), whereas 42.86 % gender of respondents are female visited parks located at a distance beyond more 2 km to 3 km from their place of residence.

Table 7.2 Distance Respondents by Different Socio-Demographic Groups to Visit Surveyed Parks

Socio-Demographic Characteristics	Distance to the Visitors Park from Place of Residence				
	< 1 km	1 to 2 km	>2 to 3 km	>3 to 5 km	>5 km
Gender					
Male (*n=595*)	56.25% (45)	64.66% (86)	57.14% (72)	66.25% (159)	70.18% (233)
Female (*n=316*)	43.75% (35)	35.34% (47)	42.86% (54)	33.75% (81)	29.82% (99)
P (T-test)	0.08	0.19	**0.01***	0.32	0.23
Age					
< 15 years *(n = 21)*	5% (4)	5.26% (7)	0.79% (1)	2.08% (5)	1.20% (4)
15 to 25 years (*n=481*)	56.25% (45)	52.63% (70)	54.76% (69)	52.76% (127)	51.20% (170)
26 to 45 years (*n=382*)	37.50% (30)	10.53% (50)	37.59% (55)	42.92% (103)	43.92% (144)
>45 years *(n=27)*	1.25% (1)	40.60% (6)	4.51% (1)	2.08% (5)	4.22% (14)
P (ANOVA)	0.54	0.06	0.15	0.82	0.06
Occupation					
Employee (*n =208*)	15.28% (11)	18.80% (25)	16.67 % (21)	25.42 % (61)	27.11 % (90)
Entrepreneur (*n= 176*)	20.83% (15)	20.30 % (27)	20.63 %(26)	21.67% (52)	16.87% (56)
Service (*n=101*)	6.94% (5)	10.53 % (14)	9.52 % (12)	7.08 % (17)	15.96 % (53)
Student (*n=355*)	56.94% (41)	40.60 %(54)	41.27 % (52)	39.58 % (95)	34.04% (113)
Housewife (*n= 71*)	11.11 % (8)	9.77% (13)	11.90 % (15)	6.25% (15)	6.02% (20)
P (ANOVA)	0.61	0.13	**0.04 ***	0.12	0.48

* p < 0.05

In comparison to Service visitors (9.52 %), a greater proportion of student (41.27 %) people travelled more than 2 km to 3 km from their place of residence to visit parks (p=0.04).

7.7 Analysis Respondents Opinion and Brand Reputation Survey

Table 7.3 show the percentage of sentiment and brand reputation from 10 thematic parks, average of opinion positive more than opinion negative from respondents with 86.56 % positive and 13.44 % negative opinion. Brand reputation from 10 thematic parks from respondents with average 73.12 % is mean brand of thematic parks is very good.

Table 7.3 Sentiment and Brand Reputation Survey

Name of Park	Survey Reviews		
	Opinion Positive	Opinion Negative	Brand Reputation
Lansia Park	**87.25%**	**12.75%**	**74.50%**
Centrum Music Park	**91.62%**	**8.38%**	**83.24%**
Photo Park	**89.10%**	**10.90%**	**78.20%**
Fitness Park	**86.49%**	**13.51%**	**72.98%**
Superhero Park	**87.50%**	**12.50%**	**75.00%**
Gesit Park	**86.40%**	**13.60%**	**72.80%**
Jomblo Park	**86.01%**	**13.99%**	**72.02%**
Film Park	**91.64%**	**8.36%**	**83.28%**
Pet Park	**82.68%**	**17.32%**	**65.36%**
Inclusion Park	**76.92%**	**23.08%**	**53.84%**
Average	86.56%	13.44%	73.12%
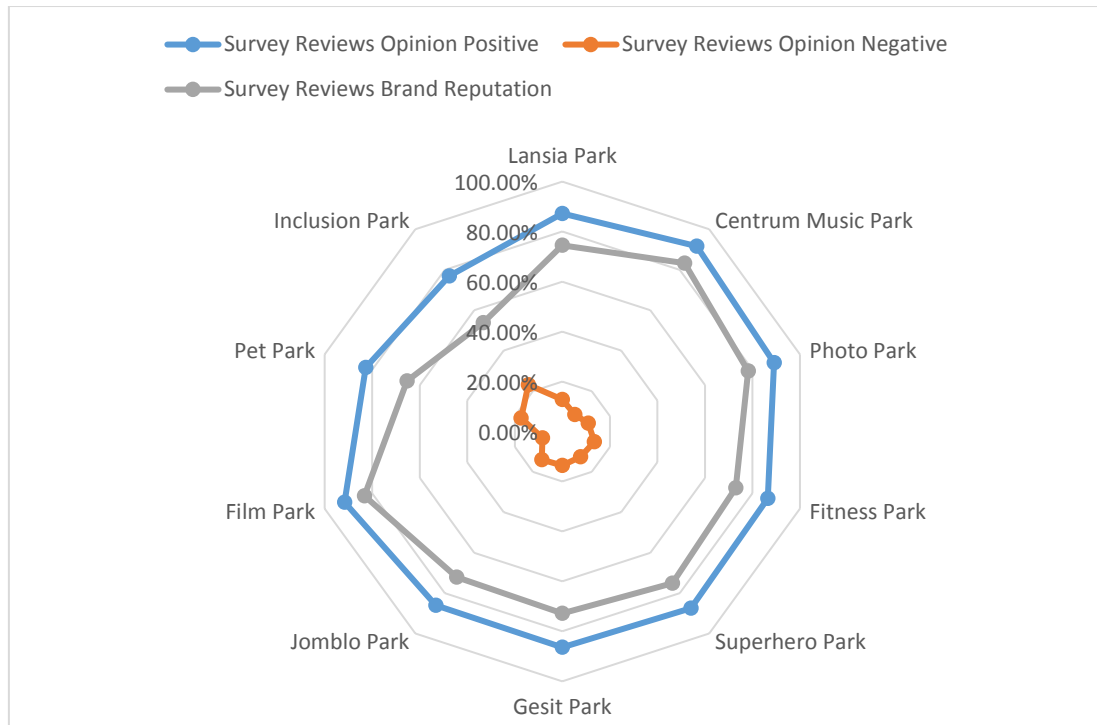
Figure 7.8 Percentage Sentiment and Brand Reputation of Respondents Opinion

Figure 7.8 shows that sentiment and brand reputation form respondent's opinion 10 thematic parks. The greatest of brand reputation from 10 thematic parks is Film Park with sentiment positive 91.64 %, sentiment negative 8.36 % and brand reputation 83.28 % (sentiment positive more than sentiment negative). Lowest percentage of brand reputation is Inclusion Park with sentiment positive (76.92 %), sentiment negative (23.08 %), and brand reputation is 53.84%, but this range is positive because sentiment positive more than negative sentiment.

7.8 Confirming Online Reviews and Field Survey Reviews

Table 7.4 show the sentiment opinion form online and survey reviews. From online reviews data and survey data we determine if the variances are equal or unequal. T-Test: Two-Sample Assuming Equal Variances: Choose this tool when you want to perform a two-sample test and you have reason to assume the means of both samples equal each other.

Table 7.4 Sentiment Opinion Online and Survey Reviews

Name of Park	Opinion Online Reviews		Opinion Survey Reviews	
	Positive	Negative	Positive	Negative
Superhero Park	87.23%	12.77%	**87.25%**	**12.75%**
Centrum Music Park	86.89%	13.11%	**91.62%**	**8.38%**
Photo Park	90.32%	9.68%	**89.10%**	**10.90%**
Gesit Park	83.75%	16.25%	**86.49%**	**13.51%**
Fitness Park	92.05%	7.95%	**87.50%**	**12.50%**
Jomblo Park	87.01%	12.99%	**86.40%**	**13.60%**
Film Park	98.89%	1.14%	**86.01%**	**13.99%**
Lansia Park	98.97%	1.03%	**91.64%**	**8.36%**
Pet Park	74.58%	25.42%	**82.68%**	**17.32%**
Inclusion Park	96.97%	3.03%	**76.92%**	**23.08%**
Average	89.67%	10.34%	86.56%	13.44%
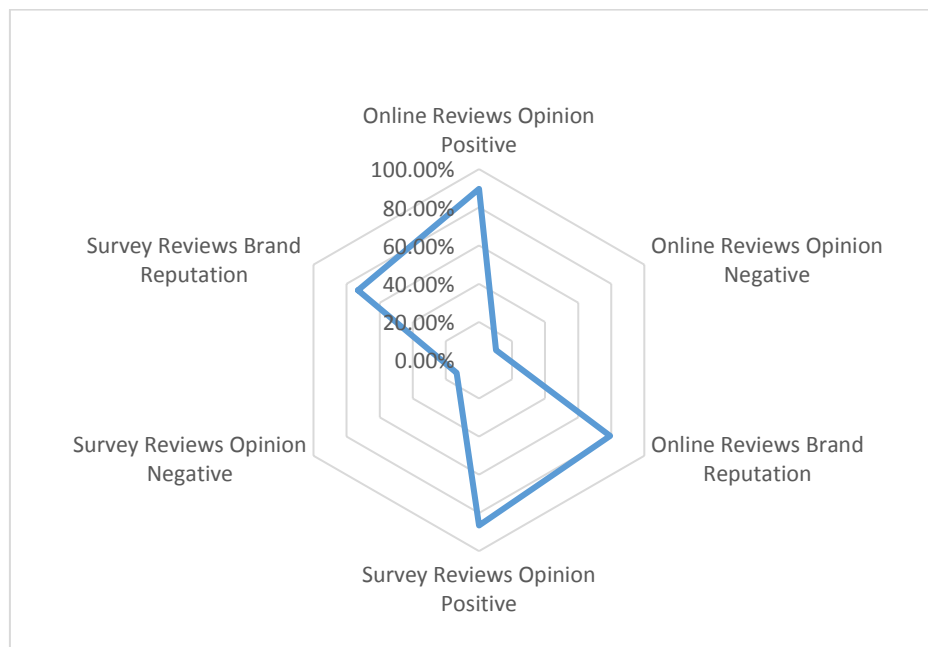
Figure 7.9 Percentage Sentiment and Brand Reputation Online and Survey Data

Figure 7.9 shows that sentiment and brand reputation from online and survey data is similar with symmetries radar graph. We assume that online and survey data are equal.

Table 7.5 T-Test: Two-Sample Assuming Equal Variances (Sentiment Positive Online and Survey)

	Positive Opinion Online Reviews	*Positive Opinion Survey Reviews*
Mean	0.89666	0.86561
Variance	0.005715414	0.001861537
Observations	10	10
Pooled Variance	0.003788475	
Hypothesized Mean Difference	0	
df	18	
t Stat	**1.128013726**	
P(T<=t) one-tail	0.13706289	
t Critical one-tail	1.734063607	
P(T<=t) two-tail	**0.27412578**	
t Critical two-tail	2.10092204	

The T-test results show the mean for each of the data sets, the variance, the number of observations, the pooled variance value, the hypothesized mean difference, the degrees of freedom (abbreviated as df), the t-value (or t-stat), and the probability values for one-tail and two-tail tests. If you specify a mean difference other than zero, use: two-tail p value (difference = hypothesized mean difference); one-tail p value (difference < hypothesized mean difference); 1-one tail p value (difference > hypothesized mean difference). Compares the p-value (0.27) to significance level (0.05) and tell that cannot reject the Null Hypothesis because p > 0.05 (means are the same)

Table 7.6 Brand Reputation Online Reviews and Survey Data

Name of Park	Brand Reputation Online (%)	Brand Reputation Survey (%)
Superhero Park	74.46	74.5
Centrum Music Park	73.78	83.24
Photo Park	80.64	78.2
Gesit Park	67.5	72.98
Fitness Park	84.1	75
Jomblo Park	74.02	72.8
Film Park	97.75	72.02
Lansia Park	97.94	83.28
Pet Park	49.16	65.36
Inclusion Park	79.33	53.84

Figure 7.10 shows that box plot from brand reputation online reviews data with survey data is symmetries and we assume that brand reputation from 10 thematic parks form online reviews data and survey data is similar.
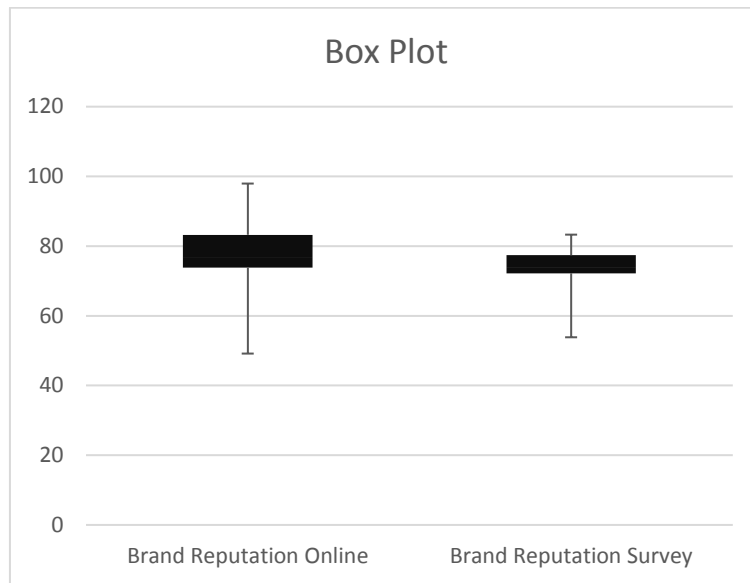
Figure 7.10 Box Plot Brand Reputation Online Reviews and Survey Data

Table 7.7 T-Test: Two-Sample Assuming Equal Variances (Brand Reputation Online and Survey Data)

	Brand Online	Brand survey
Mean	77.868	73.122
Variance	202.4018178	74.46146222
Observations	10	10
Pooled Variance	138.43164	
Hypothesized Mean Difference	0	
df	18	
t Stat	0.90197615	
P(T<=t) one-tail	0.189490515	
t Critical one-tail	1.734063607	
P(T<=t) two-tail	**0.378981031**	
t Critical two-tail	2.10092204	

Compares the p-value (0.37) to significance level (0.05) and tell that cannot reject the Null Hypothesis because p > 0.05 (means are the same).

7.9 Section Conclusion

The socio-demographic characteristic is very important to understand of visitors to the park because personal characteristics, companion, work and living situations tend to determine recreation activity response [6]. Amongst the visitors the visitors, it is seen than a lesser proportion of female visitors visit the park than male, which is probably because female perceive more constraints to outdoor recreation participation like personal safety concerns, inadequate facilities and preoccupation with office and household work [7] than male do. The greatest (52.80 %; n= 481) number of respondents were between 15 to 25 years old. A majority (38.97 %; n= 355) number of respondents were student. Based on the results of a survey of 10 thematic parks with 911 respondents we found that, The percentage distribution distance respondents home to park, where 36 % respondents with a distance of over than 5 km, this indicates that the park is not only used by residents but also for outside residents. It means that the park has an attraction to visit without affected by distance and showing that the park has branding because it is more widely known.

Our study reveals some similar result in both sentiment opinion and brand reputation from online reviews data with survey reviews data. Average sentiment positive from online reviews and survey reviews data more than sentiment negative. Brand reputation online reviews data (77.86 % positive sentiment), brand reputation survey reviews data (73 % positive sentiment). Compares the p-value (0.27) to significance level (0.05) sentiment form online reviews data and survey reviews data, tell that cannot reject the null hypothesis because p > 0.05 (means are the same). Compares Brand Reputation online reviews data and survey reviews data, the p-value (0.37) to significance level (0.05) and tell that cannot reject the null hypothesis because p > 0.05 (means are the same).

This study confirms the capacity of social network data in visitors' perceptions shows great promise in assessing visitor's opinion as there is a large volume of data available online which implicitly demonstrate users' attitudes and emotion using text. By confirming social network data and survey data, online data may prove favorable owing to the quantity of data available and cost-effectiveness of its procurement. A combined research method is developed using both data source. While understanding the strength and weakness of both methods, a more comprehensive understanding can be generated by utilizing the strength of two data sources.

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Chapter 8. Social Network Data towards Developing Attractiveness of Urban Park

8.1 Introduction

Urban parks, an essential component of urban green infrastructure, are known for their multiple ecosystem services to the residents in the cities [1]. Parks, as well as other urban open spaces, are seen as objects of urban regeneration and are also tangible entities, publicly lived and owned by everyone [2]. As successful places support and facilitate activities, the design of urban spaces should be informed by an awareness of how people use them [3]. The existence of a thematic green open space in Bandung is one of the pioneers in the urban landscape of Indonesian cities. In addition, the thematic park in Bandung is also one of the efforts to realize the concept of a green city besides its function as a medium of channeling citizens' aspiration. Furthermore, the thematic park concept is to make difference between one park and other parks and to define its own uniqueness.

As public spaces, such as parks, can also be functioned as a place to express opinion, visitor's opinion plays an important role. Recently, the online reviews data particularly has been considered as an important factor to influence consumers' decision and are valued as assets based on valued information. In this research, we used online reviews method from google maps to collect all information from reviewers about the thematic parks and to analyze the attractiveness of the thematic parks in Bandung City. Our approach is to evaluate visitor's perceptions by identifying sentences from opinions or reviews regarding the fulfillment of thematic park functions based on its user/visitor, facilities, community activities and atmosphere of the park.

The regulation of the Minister of public works in Indonesia, the construction of a park must fulfill several basic functions of the park, namely ecological, socio-cultural, aesthetic and economic functions. The basic characteristics of thematic parks include function, location, and potential. Based on these functions, this chapter will evaluate dominant factors attractiveness of park based on online reviews of park users. One of the objectives of the development of thematic parks is to fulfil the creative space of the creative community in Bandung. Evaluation categories were take form literature studies from various sources. More detail can be seen in Table 8.1.

Table 8.1 Topic Category and Variable of Evaluation Attractiveness of Park

No	Category	Variable	Example of reviews by text
1	User or Community	Park users	This park suitable for children
2	Activities	Diversity of activities in the park	Nice place for jogging in the morning
3	Facilities	Facilities in the park	This park has a playground for children
4	Atmosphere	Aesthetic of the park Comfort of park Cleanliness	This park is beautiful This park is comfortable for relaxing But this park is so dirty

8.2 Topic Extraction

We collected all reviews from google website for 10 thematic parks in Bandung city. Then, data extraction is established through google maps website to the given location for each thematic park. The overview of conducted methodology and proposed system flows is shown in the figure 8.1. This study used auto-operation order for a web crawler to collect data from Google maps website. We collected all online reviews of 10 thematic parks in Bandung city as study location. Typical verbal description show in Table 8.2, which transforms users name and reviews.

Table 8.2 Verbal Description example on Google Maps Reviews

Location	Verbal Descriptions (translate from Indonesian Language)
(1)	(2)
Superhero Park	One place of recreation for inviting children's to play. There is a playground, also a photo spot for superheroes
Centrum Music Park	Cool hangout for the musicians, here too you can while training and sharing knowledge and experience with other musicians in Bandung.
Photo Park	I love this place since the huge trees make the atmosphere become fresher.
Gesit Park	The place is small but shady & comfortable. Unfortunately, there are a lot of cables that are not neat.
Fitness Park	Good place for free exercise.
Jomblo Park	Nice place to play or hang out with friends and your community, but have to be careful because it is near traffic.
Film Park	Nice, clean and not smelly even though using grass synthesis is not like in the square. But unfortunately the socket only runs
Lansia Park	Nice place. Recommended place to walk or run.
Pet Park	The one and only park special for pets in Bandung (as I know). Need more attention for maintenance the facilities.
Inclusion Park	The place is comfortable. Fun relaxing with family. There is free Wi-Fi too.
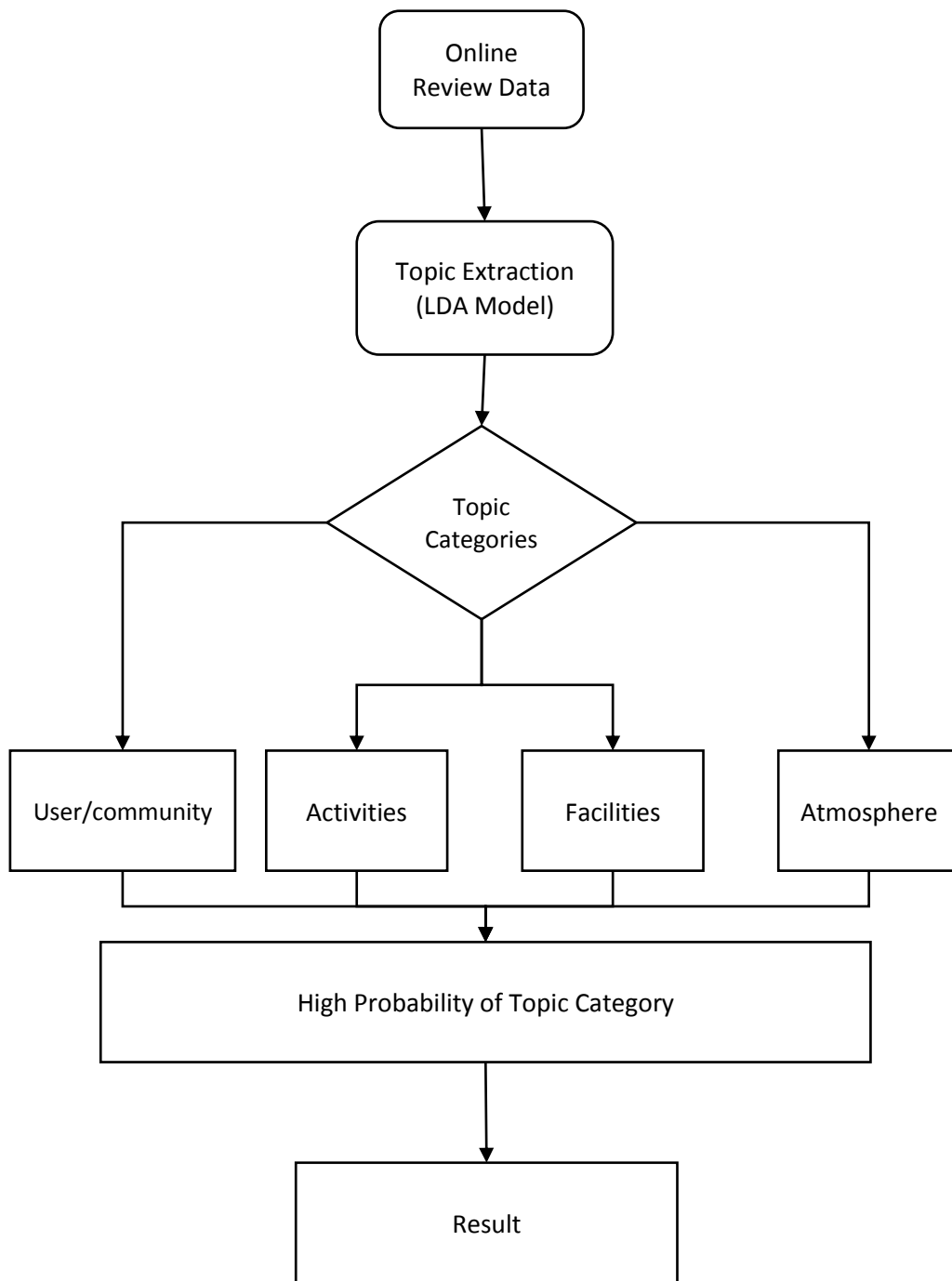
Figure 8.1 Procedure to Identify Attractiveness of Parks

Latent Dirichlet Allocation model, a generative probabilistic model, to collect discrete text data [1]. The LDA (Latent Dirichlet Allocation) model is a three-level (documents-topics-words) hierarchical Bayesian model based on unsupervised learning, which refers to the analysis used to draw inferences from unlabeled datasets (i.e., datasets without an output variable). Each document is assumed to be a random mixture of several underlying topics in which each topics is characterized by a probability distribution over different words. Latent Dirichlet Allocation is widely used to extract the latent topic information from vast amounts of documents.

Assume that we have a corpus with collection documents donated by:

$$D = \{d_1, d_2, \ldots, d_{|D|}\}$$

Where |D| is the document number. The vocabulary is donated by:

$$V = \{w_1, w_2, \ldots w_{|V|}\}$$

Where |V| is the word number. Each documents in the corpus is a sequence of Nd words donated by:

$$d = \{w_{1d}, w_{2d}, \ldots w_{|Nd|}\}$$

Where w_{Nd} refers to the latent Nth word in document d. The latent topic set is donated by:

$$K = \{\Phi_{1d}, \Phi_{2d}, \ldots \Phi_{|K|}\}$$

Where |K| is the topic number. Figure 8.2 shows the graphical model representation of the Latent Direchlet Allocation.
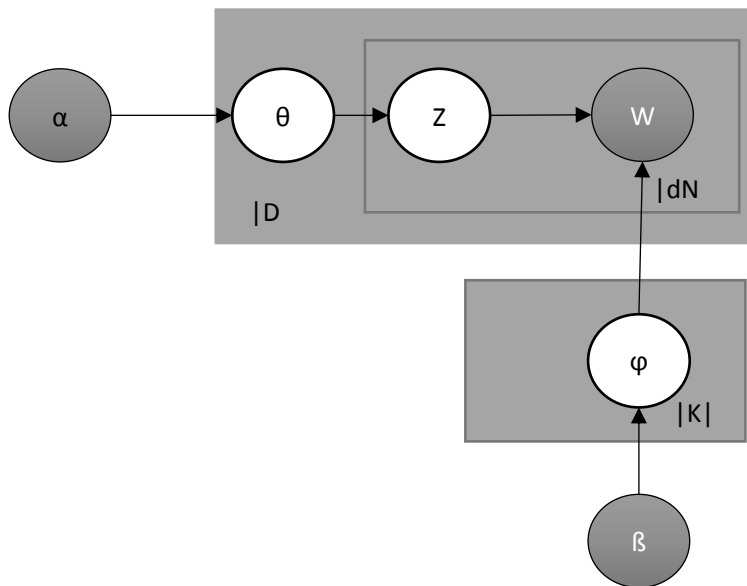
Figure 8.2 Latent Topic Generate Example [1]

The LDA model trades of two goals in the learning process. The first is the allocation of words to different topics in each document. The second goal is the assignment of high probability to a few terms in each topics. Figure 8.3 show visualization of the entire process of LDA. The word-topic matrix, one output of LDA, represents the co-occurrence probability of one word and one latent topic. For each topic, we use the word-topic matrix to present the top 20 words and to present the corresponding weight of each word. The weights of each word reflect the relative importance of each topic. Accordingly, the total of these weights reflects the relative importance of each topic.
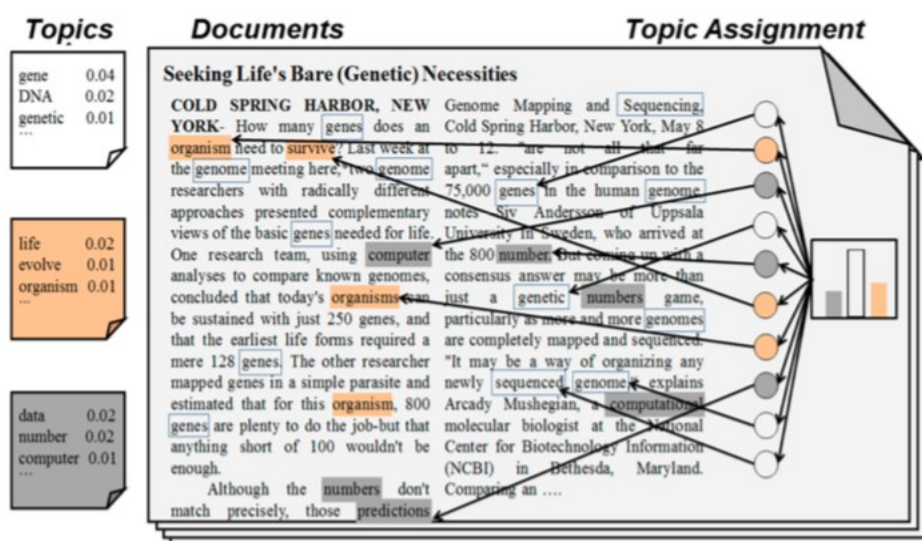
Figure 8.3 Topic Extraction Process of LDA model (adapted from [2])

As for topic naming based of the naming process manually summarizes the meaning of extended top words [3-7].

8.3 Dataset Description

The dataset used in this chapter was sourced from Google Maps online reviews 10 thematic parks in Bandung City. Table 8.3 show the total reviews from 10 thematic parks.

Table 8.3 Online Reviews Dataset from 10 Thematic Parks

No	Name of Park	Number of reviews
1	Superhero Park	775
2	Centrum Music Park	390
3	Photo Park	391
4	Gesit Park	78
5	Fitness Park	185
6	Jomblo Park	631
7	Film Park	710
8	Lansia Park	1411
9	Pet Park	202
10	Inclusion Park	30
	Total	4803 reviews
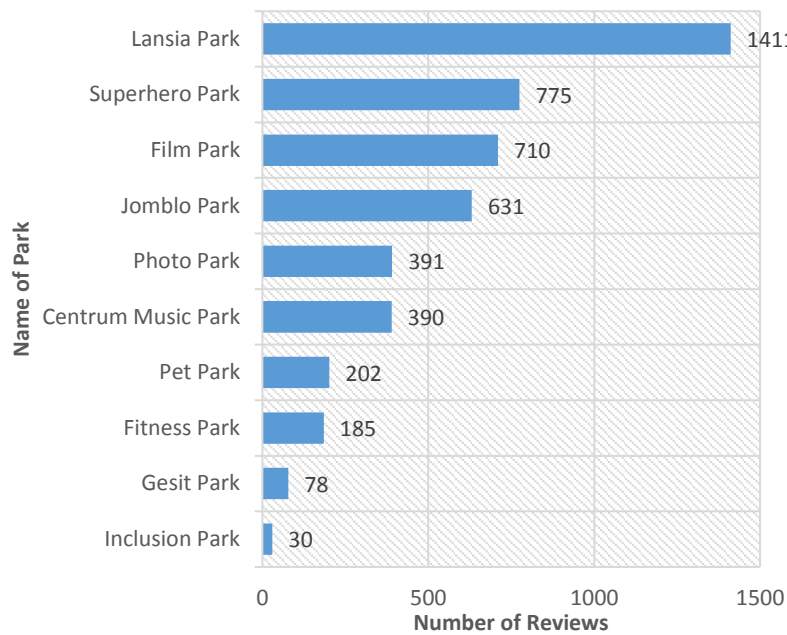
Figure 8.4 Number of Reviews Data

From the extraction of data obtained the number of online review data by filtering data, only the reviewers who wrote comments on the review form. We collected 1411 reviews of Lansia Park, 775 reviews of Superhero Park, 710 reviews of Film Park, 631 reviews of Jomblo Park, 391 reviews of Photo Park, 390 reviews of Centrum Music Park, 202 reviews of Pet Park, 185 reviews of Fitness Park, 78 reviews of Gesit Park, and 30 reviews of Inclusion Park. Lansia Park with the highest number of reviews and Inclusion Park with the lowest number of reviews.

8.4 Attractive Component from Topic Extraction

Of the result of this study indicated 4 topic category regarding keywords prioritization for identifying attractiveness of thematic parks based on online reviews. Then, we classified the topic category into four categories namely: user/community; activities; facilities, and atmosphere of the park. We named the extracted four topics. "User or Community", refers to attraction user of park visiting of park. "Activities" refers to activities of visitors in the park. "Facilities" refers to attraction of facilities in the park. "Atmosphere", refers to visitor's experience of park. The term of keywords text review of 10 parks will be discussed in this following part.

8.4.1 Topic Extraction of Superhero Park Reviews

As for the appropriate topic with number K=4 for Superhero Park reviews (Table 8.4), we can distinctly each topic by summarizing the corresponding top 20 words. The four topics include "user/community", "activities", "facilities", and "atmosphere". As shown in Table 8.4, the total weights of each topic represent the relative importance of each topic.

Table 8.4 Topic Summary with K (the number of topics =4) Superhero Park Reviews

Topic 1. User/Community 0.1629							
batman	0.0018	entertainment	0.0018	good	0.0098	play	0.0141
characters	0.0014	families	0.0011	hangout	0.0016	playground	0.0058
children's	0.0377	family	0.0042	inviting	0.0014	statues	0.0068
comfortable	0.0064	free	0.0084	park	0.0205	suitable	0.0094
crowded	0.0038	fun	0.0033	place	0.0166	superhero	0.0070
Topic 2. Activities 0.1414							
park	0.0205	enjoy	0.0005	relaxing	0.0020	especially	0.0012
place	0.0166	activities	0.0003	refreshing	0.0002	recreation	0.0009
inviting	0.0014	visiting	0.0007	children's	0.0377	meeting	0.0001
play	0.0141	sport	0.0002	crowded	0.0038	comfortable	0.0064
free	0.0084	cool	0.0072	good	0.0098	suitable	0.0094
Topic 3. Facilities 0.2064							
superheroes	0.0020	Play	0.0250	Superman	0.0009	place	0.0173
Playground	0.0012	comfortable	0.0064	toilet	0.0013	free	0.0084
facilities	0.0030	Parking	0.0026	trees	0.0012	cool	0.0072
statue	0.0068	free	0.0085	children's	0.0377	family	0.0042
children's	0.0380	Wi-Fi	0.0048	suitable	0.0094	park	0.0205
Topic 4. Atmosphere 0.084							
friendly	0.0008	play	0.0141	bad	0.0017	cozy	0.0004
suitable	0.0094	playground	0.0058	unique	0.0006	happiness	0.0004
atmosphere	0.0009	comfortable	0.0064	exiting	0.0010	enjoy	0.0005
cool	0.0072	Recommended	0.0003	shady	0.0011	attractions	0.0008
good	0.0098	park	0.0205	thematic	0.0013	entertainment	0.0018

The weight (probability value) of each extended word denotes the proportion of the extended word frequency within each topic out of the total word number. The relative weight of each topic is calculated as the sum of the relative weights of its 20 words.
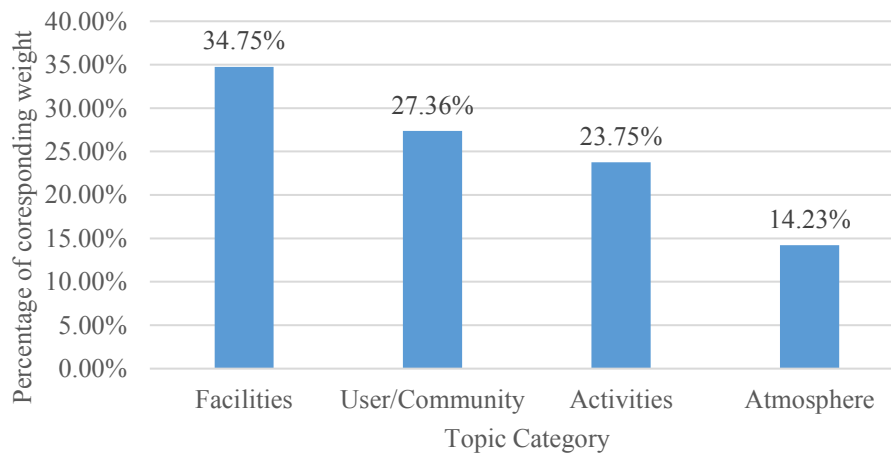
Figure 8.5 Distribution of Corresponding Weight each Topic of Superhero Park Reviews

The result show that "Facilities" the most important factor attractiveness of thematic park in Superhero Park. Many visitors share their experience about the facilities in the park. Superhero Park is thematic park with concept especially for children and family with playground facilities and also there are many statues are children's idols.

8.4.2 Topic Extraction of Centrum Music Park Reviews

Table 8.5 shows the total weights of each topic represent the relative importance of each topic.

Table 8.5 Topic Summary with K (the number of topics =4) Centrum Music Park Reviews

Topic 1. User/Community 0.0562							
musicians	0.0012	good	0.0159	play	0.0049	crowded	0.0028
friends	0.0034	kids	0.0015	audience	0.0006	community	0.0021
gather	0.0009	comfortable	0.0073	hangout	0.0024	convenient	0.0009
family	0.0006	come	0.0012	performances	0.0006	instruments	0.0006
event	0.0018	children's	0.0006	suitable	0.0061	outdoor	0.0006
Topic 2. Activities 0.0899							
playing	0.0028	exercise	0.0015	sports	0.0015	practice	0.0018
music	0.0174	hangout	0.0024	comfortable	0.0073	good	0.0159
musical	0.0024	performances	0.0006	suitable	0.0061	cool	0.0153
musicians	0.0012	relaxing	0.0024	instruments	0.0006	basketball	0.0043
event	0.0018	recreation	0.0006	gathering	0.0018	activities	0.0018
Topic 3. Facilities 0.0938							
stage	0.0012	free	0.0070	place	0.0355	hangout	0.0024
performances	0.0006	Wi-Fi	0.0067	park	0.0128	food	0.0018
musical	0.0024	amphitheater	0.0006	trees	0.0043	court	0.0006
parking	0.0006	suitable	0.0061	field	0.0015	comfortable	0.0073
toilet	0.0006	maintenance	0.0006	colosseum	0.0003	outdoor	0.0006
Topic 4. Atmosphere 0.0941							
good	0.0159	nice	0.0131	great	0.0021	fun	0.0009
shady	0.0055	cozy	0.0034	event	0.0018	maintained	0.0009
comfortable	0.0073	beautiful	0.0024	interesting	0.0006	best	0.0006
music	0.0174	noise	0.0006	inspiration	0.0012	cleanliness	0.0006
cool	0.0153	crowded	0.0028	convenient	0.0009	green	0.0006

The result show that there are not significant different the percentage coresponding weight each topic. Figure 8.6 shows that the greatest of percentange coressponding is "Athmosphere" topic (28.18%), then facilities topic (28.09%), activities (26.90%), and user/community (16.83%).
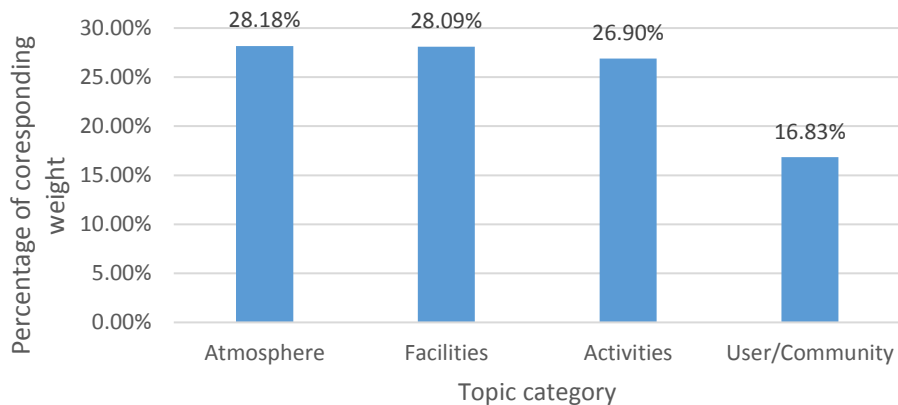
Figure 8.6 Distribution of Corresponding Weight each Topic of Centrum Music Park Reviews

8.4.3 Topic Extraction of Photo Park Reviews

Table 8.6 shows the total weights of each topic represent the relative importance of each topic. Figure 8.7 shows the percentage corresponding weight of topic category.

Table 8.6 Topic Summary with K (the number of topics =4) Photo Park Reviews

Topic 1. User/Community 0.0998							
children	0.0072	photographs	0.0012	comfortable	0.0095	playground	0.0035
suitable	0.0040	family	0.0043	come	0.0012	selfie	0.0017
place	0.0292	park	0.0165	community	0.0006	kids	0.0026
photos	0.0020	convenient	0.0012	play	0.0067	friends	0.0009
photography	0.0014	concept	0.0009	hangout	0.0038	people	0.0014
Topic 2. Activities 0.0711							
comfortable	0.0095	playing	0.0026	selfie	0.0017	crowded	0.0023
come	0.0012	suitable	0.0040	selling	0.0009	break	0.0014
hangout	0.0038	photos	0.0020	activities	0.0003	convenient	0.0012
place	0.0292	photography	0.0014	relaxing	0.0023	sitting	0.0012
playground	0.0035	photograph	0.0006	break	0.0014	picnic	0.0006
Topic 3. Facilities 0.1108							
Wi-Fi	0.0139	toilet	0.0014	park	0.0165	swing	0.0006
free	0.0124	play	0.0067	place	0.0292	photos	0.0020
parking	0.0014	playground	0.0035	maintained	0.0032	culinary	0.0006
trees	0.0026	comfortable	0.0095	shelter	0.0009	plants	0.0006
facilities	0.0035	community	0.0006	roadside	0.0006	photographs	0.0012
Topic 4. Atmosphere 0.0940							
shady	0.0046	noise	0.0006	convenient	0.0012	exciting	0.0006
crowded	0.0023	hanging	0.0017	concept	0.0009	friendly	0.0006
beautiful	0.0032	cozy	0.0014	fun	0.0009	place	0.0292
comfortable	0.0095	great	0.0014	interesting	0.0009	nice	0.0165
trees	0.0026	cleanliness	0.0012	dark	0.0006	cool	0.0142
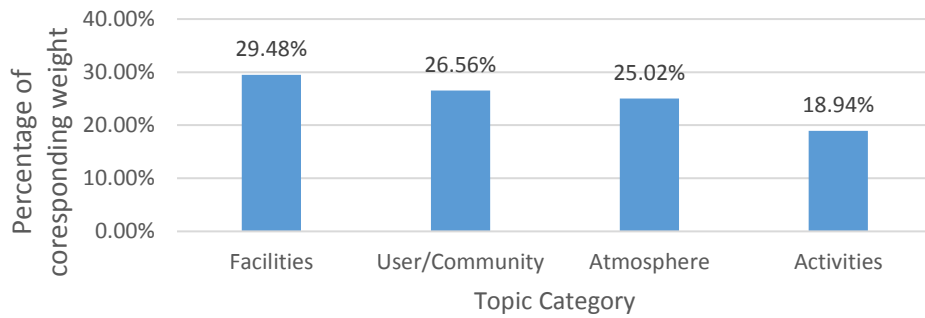
Figure 8.7 Distribution of Corresponding Weight each Topic of Photo Park Reviews

The result show that there are not significant different the percentage coresponding weight each topic. Figure 8.7 shows that the greatest of percentange coressponding weight is "Facilities" topic (29.48%), then user/community topic (26.56%), atmosphere (25.02%), and activities (18.94%).

8.4.4 Topic Extraction of Gesit Park Reviews

Table 8.7 shows the total weights of each topic represent the relative importance of each topic.

Table 8.7 Topic Summary with K (the number of topics =4) Gesit Park Reviews

Topic 1. User/Community 0.0622							
good	0.0116	concept	0.0029	friends	0.0014	sport	0.0014
comfortable	0.0087	playground	0.0029	fun	0.0014	visitors	0.0014
suitable	0.0058	treatment	0.0029	hanging	0.0014	walk	0.0014
free	0.0043	free	0.0043	jogging	0.0014	come	0.0014
children	0.0029	exercise	0.0014	play	0.0014	cool	0.0014
Topic 2. Activities 0.0767							
sports	0.0014	hangout	0.0029	cool	0.0014	free	0.0043
climb	0.0029	chat	0.0014	play	0.0014	treatment	0.0029
exercise	0.0014	relaxing	0.0087	walk	0.0014	fun	0.0014
suitable	0.0058	concept	0.0029	place	0.0203	sitting	0.0014
jogging	0.0014	playground	0.0029	comfortable	0.0087	taking	0.0014
Topic 3. Facilities 0.0897							
free	0.0043	sport	0.0014	free	0.0043	dark	0.0029
toilet	0.0014	trees	0.0014	shady	0.0043	ordinary	0.0029
facilities	0.0029	shady	0.0043	children	0.0029	playground	0.0029
parking	0.0058	park	0.0232	climb	0.0029	play	0.0014
gymnastics	0.0014	nice	0.0145	concept	0.0029	exercise	0.0014
Topic 4. Athmospher 0.1274							
park	0.0232	comfortable	0.0087	shady	0.0043	ordinary	0.0029
maintained	0.0145	atmosphere	0.0072	beautiful	0.0029	quite	0.0029
nice	0.0145	suitable	0.0058	concept	0.0029	attractive	0.0014
good	0.0116	clean	0.0043	green	0.0014	cool	0.0014
small	0.0101	cozy	0.0043	thematic	0.0014	fun	0.0014
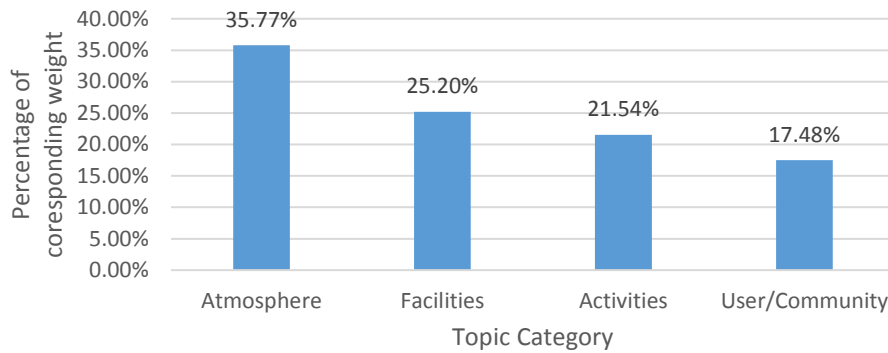
Figure 8.8 Distribution of Corresponding Weight each Topic of Gesit Park Reviews

The result show that the most important factor attractiveness of Gesit Park is Atmosphere category with 35.77%, but percentage corresponding weight is not significant different each topic. Facilities topic with 25.20%, activities (21.54%), and user/community topic (17.48%)

8.4.5 Topic Extraction of Fitness Park Reviews

Table 8.8 shows the total weights of each topic represent the relative importance of each topic. Figure 8.9 shows the percentage corresponding weight of topic category Fitness Park Reviews.

Table 8.8 Topic Summary with K (the number of topics =4) Fitness Park Reviews

Topic 1. User/Community 0.0790							
free	0.0156	equipment	0.0063	hangout	0.0023	convenient	0.0012
exercise	0.0115	sport	0.0058	healthy	0.0023	citizens	0.0006
cool	0.0092	families	0.0006	kids	0.0012	community	0.0006
children	0.0012	comfortable	0.0052	playing	0.0017	concept	0.0006
jogging	0.0075	tools	0.0035	suitable	0.0017	fun	0.0006
Topic 2. Activities 0.0818							
hangout	0.0023	suitable	0.0017	gym	0.0058	sitting	0.0017
comfortable	0.0052	fitness	0.0184	football	0.0035	convenient	0.0012
come	0.0006	good	0.0138	exercising	0.0017	climbing	0.0006
relaxing	0.0023	cool	0.0092	playing	0.0017	gathering	0.0006
sporting	0.0012	jogging	0.0075	running	0.0017	walk	0.0012
Topic 3. Facilities 0.0726							
park	0.0121	street	0.0012	gym	0.0058	goodly	0.0006
facilities	0.0017	shady	0.0035	sport	0.0058	green	0.0006
parking	0.0017	Wi-Fi	0.0075	maintained	0.0023	lifting	0.0006
toilet	0.0012	good	0.0138	equipments	0.0006	concept	0.0006
trees	0.0029	nice	0.0092	fieldsport	0.0006	futsal	0.0006
Topic 4. Atmosphere 0.0640							
free	0.0156	great	0.0029	convenient	0.0012	community	0.0006
good	0.0138	better	0.0017	enjoying	0.0012	concept	0.0006
cool	0.0092	clean	0.0017	fresh	0.0012	cozy	0.0006
comfortable	0.0052	suitable	0.0017	representative	0.0012	exciting	0.0006
shady	0.0035	green	0.0006	beautiful	0.0006	fun	0.0006
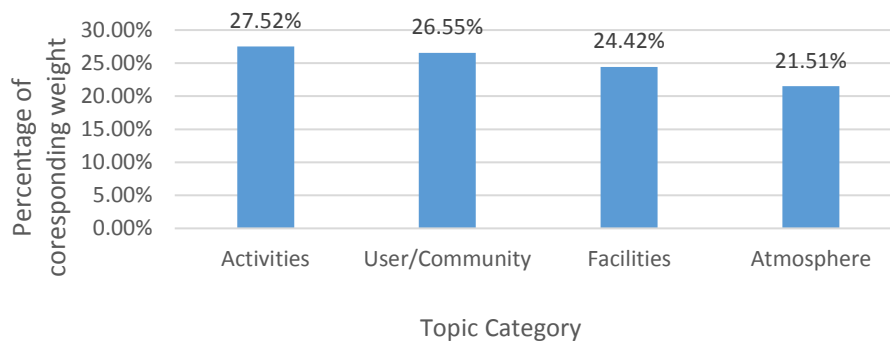
Figure 8.9 Distribution of Corresponding Weight each Topic Fitness Park Reviews

The result show that the most important factor attractiveness of Fitness Park is Activities category with 27.52%, but percentage corresponding weight is not significant different each topic. User/community topic with 26.55%, facilities topic (24.42%), and Atmosphere topic (17.48%)

8.4.6 Topic Extraction of Jomblo Park Reviews

Table 8.9 shows the total weights of each topic represent the relative importance of each topic. Figure 8.10 shows the percentage corresponding weight of topic category Jomblo Park Reviews.

Table 8.9 Topic Summary with K (the number of topics =4) Jomblo Park Reviews

Topic 1. User/Community 0.0419							
children	0.0016	communities	0.0005	create	0.0013	hobby	0.0005
family	0.0007	free	0.0049	skate park	0.0011	traders	0.0005
suitable	0.0040	hangout	0.0047	playground	0.0009	concept	0.0004
comfortable	0.0058	play	0.0038	convenient	0.0007	kids	0.0011
come	0.0016	skateboarding	0.0029	friend	0.0005	single	0.0040
Topic 2. Activities 0.0607							
place	0.0239	crowded	0.0029	sitting	0.0013	dating	0.0007
comfortable	0.0058	skateboarding	0.0029	refreshing	0.0011	activities	0.0005
hangout	0.0047	relaxing	0.0018	skate park	0.0011	hunting	0.0005
single	0.0040	children	0.0016	playground	0.0009	exercise	0.0004
play	0.0038	gathering	0.0015	convenient	0.0007	chatting	0.0004
Topic 3. Facilities 0.0260							
facilities	0.0015	skate park	0.0011	strategic	0.0009	concept	0.0004
parking	0.0013	Wi-Fi	0.0053	lighting	0.0007	flowers	0.0004
seat	0.0013	maintained	0.0024	communities	0.0005	space	0.0024
toilets	0.0005	spot	0.0013	dark	0.0005	shelter	0.0007
skateboarding	0.0029	playground	0.0009	plants	0.0005	small	0.0005
Topic 4. Atmosphere 0.0528							
good	0.0117	crowded	0.0029	atmosphere	0.0009	beautiful	0.0005
nice	0.0084	space	0.0024	interesting	0.0009	dark	0.0005
cool	0.0071	unique	0.0024	shady	0.0009	noise	0.0005
comfortable	0.0058	creative	0.0011	lighting	0.0007	small	0.0005
clean	0.0031	traffic	0.0011	unmaintained	0.0007	street	0.0005

40.00%

33.43%

29.12%

23.09%

14.36%

30.00%

20.00%

10.00%

0.00%

Percentage of coresponding weight

Activities   Atmosphere   User/community   Facilities
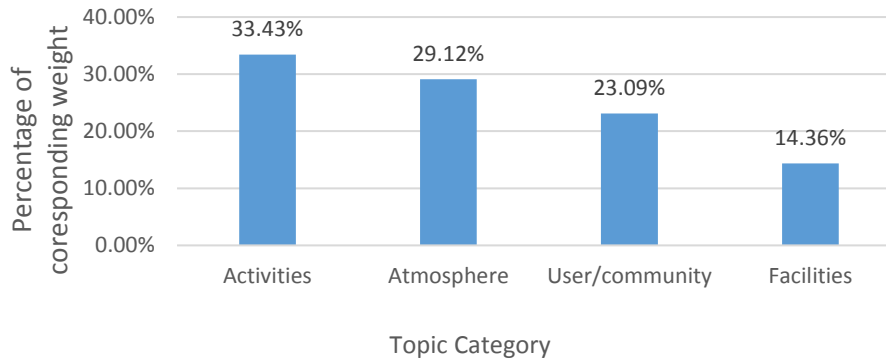
Topic Category

Figure 8.10 Distribution of Corresponding Weight each Topic of Jomblo Park Reviews

The result show that the most important factor attractiveness of Jomblo Park is Activities category with 33.43%, but percentage corresponding weight is not significant different each topic. Atmosphere topic with 29.12%, User/community topic (23.09%), and facilities topic (14.36%).

8.4.7 Topic Extraction of Film Park Reviews

Table 8.10 shows the total weights of each topic represent the relative importance of each topic. Figure 8.11 shows the percentage corresponding weight of topic category Film Park Reviews.

Table 8.10 Topic Summary with K (the number of topics =4) Film Park Reviews

Topic 1. User/Community 0.0869

place	0.0303	film	0.0053	pretty	0.0016	games	0.0007
comfortable	0.0111	free	0.0048	entertainment	0.0012	playground	0.0007
watching	0.0064	friends	0.0043	creative	0.0008	concept	0.0005
children	0.0058	gathering	0.0031	families	0.0008	events	0.0005
play	0.0054	kids	0.0024	come	0.0007	communities	0.0003

Topic 2. Activities 0.0496

watching	0.0064	playing	0.0030	playground	0.0007	comfortable	0.0111
film	0.0053	relaxing	0.0027	refreshing	0.0007	crowded	0.0011
free	0.0048	hangout	0.0022	activities	0.0004	convenient	0.0008
movie	0.0043	come	0.0007	chatting	0.0004	communities	0.0003
gathering	0.0031	meeting	0.0007	citizens	0.0003	games	0.0007

Topic 3. Facilities 0.0492

grass	0.0037	Wi-Fi	0.0022	toilet	0.0005	comfortable	0.0111
parking	0.0037	facilities	0.0014	lighting	0.0004	cool	0.0069
playing	0.0030	carpet	0.0008	dark	0.0003	maintained	0.0024
synthetic	0.0024	playground	0.0007	megatron	0.0004	entertainment	0.0012
movies	0.0022	concept	0.0005	screen	0.0041	event	0.0012

Topic 4. Atmosphere 0.0295

comfortable	0.0111	friendly	0.0012	cozy	0.0007	shady	0.0005
clean	0.0043	atmosphere	0.0010	exciting	0.0007	recommended	0.0004
beautiful	0.0018	convenient	0.0008	concept	0.0005	strategic	0.0004
unique	0.0016	creative	0.0008	happy	0.0005	attractive	0.0003
entertainment	0.0012	better	0.0007	interesting	0.0005	communities	0.0003
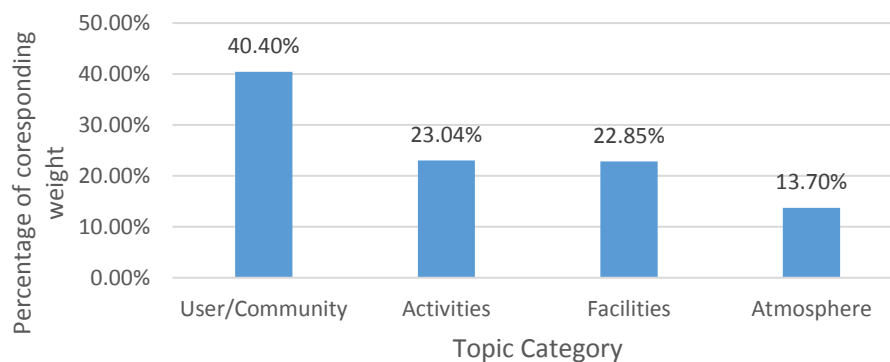
Figure 8.11 Distribution of Corresponding Weight each Topic of Film Park Reviews

The result show that the most important factor attractiveness of Film Park is Activities category with 40.40%, then activities topic with 23.04%, facilities topic (22.85%), and atmosphere topic (13.70%).

8.4.8 Topic Extraction of Lansia Park Reviews

Table 8.11 shows the total weights of each topic represent the relative importance of each topic.

Table 8.11 Topic Summary with K (the number of topics =4) Lansia Park Reviews

Topic 1. User/Community 0.0665							
place	0.0199	convenient	0.0016	kids	0.0007	families	0.0004
comfortable	0.0103	refreshing	0.0015	bring	0.0006	sport	0.0004
elderly	0.0072	play	0.0012	weekend	0.0005	good	0.0100
suitable	0.0056	traders	0.0008	gathering	0.0005	friends	0.0011
children	0.0018	visitors	0.0008	hangout	0.0005	fun	0.0011
Topic 2. Activities 0.0218							
jogging	0.0042	refreshing	0.0015	gathering	0.0005	families	0.0004
relaxing	0.0025	walking	0.0012	hangout	0.0005	playing	0.0004
exercise	0.0024	recreation	0.0011	running	0.0005	sport	0.0004
children	0.0018	selling	0.0006	shopping	0.0005	taking	0.0004
culinary	0.0016	bring	0.0006	activities	0.0004	eating	0.0004
Topic 3. Facilities 0.0408							
comfortable	0.0103	maintained	0.0017	track	0.0011	families	0.0004
elderly	0.0072	convenient	0.0016	statue	0.0011	light	0.0004
shady	0.0047	green	0.0014	plants	0.0007	playing	0.0004
Wi-Fi	0.0033	parking	0.0013	toilet	0.0007	sport	0.0004
children	0.0018	museum	0.0012	tree	0.0006	broken	0.0004
Topic 4. Atmosphere 0.0605							
cool	0.0180	beautiful	0.0036	green	0.0014	favorite	0.0007
nice	0.0078	fresh	0.0023	cozy	0.0012	friendly	0.0006
suitable	0.0056	crowded	0.0021	fun	0.0011	strategic	0.0005
clean	0.0049	atmosphere	0.0018	perfect	0.0008	safe	0.0005
shady	0.0047	convenient	0.0016	calm	0.0007	happy	0.0004

40.00%
30.00%
20.00%
10.00%
0.00%

Percentage of coresponding weight

35.09%   31.90%   21.50%   11.51%

User / Community   Atmosphere   Facilities   Activities
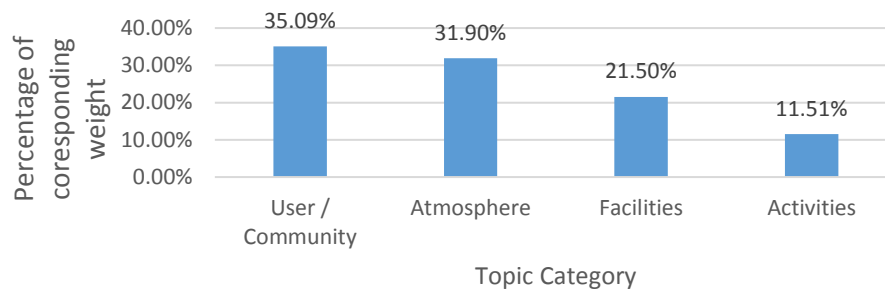
Topic Category

Figure 8.12 Distribution of Corresponding Weight each Topic of Lansia Park Reviews

The result show that the most important factor attractiveness of Lansia Park is User/community category with 35.43%%, then Atmosphere topic with 31.90%, facilities topic (21.50%), and activities topic (11.51%).

8.4.9 Topic Extraction of Pet Park Reviews

Table 8.12 shows the total weights of each topic represent the relative importance of each topic.

Table 8.12 Topic Summary with K (the number of topics =4) Pet Park Reviews

Topic 1. User/Community 0.0740

pets	0.0177	gathering	0.0043	people	0.0017	arena	0.0004
bring	0.0104	visitors	0.0030	playing	0.0017	communities	0.0004
lovers	0.0091	friends	0.0022	convenient	0.0013	entertainment	0.0004
animals	0.0078	hangout	0.0022	child	0.0009	event	0.0004
dogs	0.0069	free	0.0017	fun	0.0009	family	0.0004

Topic 2. Activities 0.0307

animals	0.0078	training	0.0017	looking	0.0009	bringing	0.0004
gathering	0.0043	relax	0.0013	provided	0.0009	communities	0.0004
walk	0.0026	taking	0.0013	running	0.0009	entertainment	0.0004
hangout	0.0022	carrying	0.0009	visited	0.0009	games	0.0004
playing	0.0017	jogging	0.0009	activity	0.0004	invited	0.0004

Topic 3. Facilities 0.0433

park	0.0190	attractive	0.0009	ornaments	0.0009	entertainment	0.0004
maintained	0.0056	benches	0.0009	broken	0.0030	fencing	0.0004
facilities	0.0026	dexterity	0.0009	arena	0.0004	landscape	0.0004
wifi	0.0022	game	0.0009	communities	0.0004	bad	0.0009
free	0.0017	lighting	0.0009	desk	0.0004	appreciation	0.0004

Topic 4. Atmosphere 0.0303

suitable	0.0039	shady	0.0022	attractive	0.0009	cozy	0.0004
comfortable	0.0035	strategic	0.0022	fun	0.0009	crowded	0.0004
clean	0.0030	friendly	0.0017	beautiful	0.0004	designed	0.0004
love	0.0030	thematic	0.0017	calm	0.0004	entertainment	0.0004
happy	0.0026	convenient	0.0013	charming	0.0004	exciting	0.0004
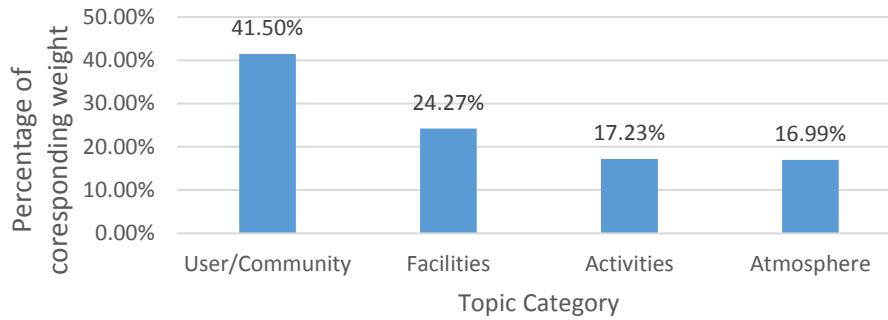
Figure 8.13 Distribution of Corresponding Weight each Topic of Pet Park Reviews

The result show that the most important factor attractiveness of Pet Park is User/community category with 41.50%, then facilities topic with 24.27%, activities topic (17.23%), and atmosphere topic (16.99%).

8.4.10 Topic Extraction of Inclusion Park Reviews

Table 8.13 shows the total weights of each topic represent the relative importance of each topic Inclusion Park reviews.

Table 8.13 Topic Summary with K (the number of topics =4) Inclusion Park Reviews

Topic 1. User/Community 0.0901

park	0.0295	children	0.0035	old	0.0017	playground	0.0017
people	0.0087	family	0.0035	elderly	0.0017	public	0.0017
play	0.0087	organized	0.0035	entertainment	0.0017	socialize	0.0017
disabilities	0.0069	adults	0.0017	especially	0.0017	suitable	0.0017
good	0.0052	community	0.0017	friends	0.0017	users	0.0017

Topic 2. Activities 0.0641

people	0.0087	family	0.0035	elderly	0.0017	public	0.0017
play	0.0087	organized	0.0035	entertainment	0.0017	recreation	0.0017
disabilities	0.0069	children's	0.0017	especially	0.0017	socialize	0.0017
good	0.0052	community	0.0017	friends	0.0017	sports	0.0017
relaxing	0.0052	old	0.0017	playground	0.0017	suitable	0.0017

Topic 3. Facilities 0.0780

comfortable	0.0173	trees	0.0052	old	0.0017	playgrounds	0.0017
facilities	0.0087	children	0.0035	disability	0.0017	sports	0.0017
play	0.0087	accessible	0.0017	elderly	0.0017	swing	0.0017
atmosphere	0.0069	broken	0.0017	entertainment	0.0017	toilet	0.0017
shady	0.0052	community	0.0017	green	0.0017	wheelchair	0.0017

Topic 4. Atmosphere 0.0745

comfortable	0.0173	friendly	0.0035	crowded	0.0017	socialize	0.0017
cool	0.0087	nice	0.0035	existing	0.0017	special	0.0017
clean	0.0052	organized	0.0035	fun	0.0017	strategic	0.0017
fresh	0.0052	quite	0.0035	great	0.0017	suitable	0.0017
shady	0.0052	beautiful	0.0017	green	0.0017	thematic	0.0017
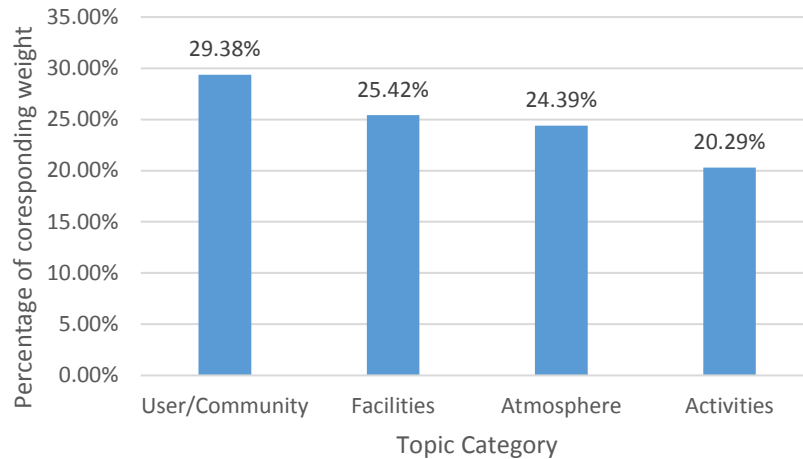
Figure 8.14 Distribution of Corresponding Weight each Topic of Inclusion Park Reviews

The result show that the most important factor attractiveness of Inclusion Park is User/community category with 29.38%%, then facilities topic with 25.42%, atmosphere topic (24.39%), and activities topic (20.29%).

8.5 Summarizing of Attractiveness Factor Thematic Parks Online Reviews

As Topic have been categorized into attractiveness variable, the topic prioritization process focus to evaluate topic categories from the all probability statistics all thematic parks. To compare each park, the summary of topic prioritization is illustrated as these following Table 8.14.

Table 8.14 Summarization of Topic Categories Thematic Parks Reviews

Name of Park	Topics Category			
	User/Community	Activities	Facilities	Atmosphere
Superhero Park	0.1629	0.1414	0.2064	0.0847
Centrum Music Park	0.0562	0.0899	0.0938	0.0941
Photo Park	0.0998	0.0711	0.1108	0.0940
Gesit Park	0.0622	0.0767	0.0897	0.1274
Fitness Park	0.0790	0.0818	0.0726	0.0640
Jomblo Park	0.0419	0.0607	0.0260	0.0528
Film Park	0.0869	0.0496	0.0492	0.0295
Lansia Park	0.0665	0.0218	0.0408	0.0605
Pet Park	0.0740	0.0307	0.0433	0.0303
Inclusion Park	0.0901	0.0641	0.0780	0.0745
Average	0.0820	0.0688	0.0811	0.0712
Percentage	27.05%	22.70%	26.75%	23.49%

To compare our hypothesis that the attractiveness of thematic parks is four category, "user/community", "activities", "facilities", and "atmosphere" with topic extraction from online reviews, we use analysis of variance (ANOVA). A one-way ANOVA using to test that compares the variance in the group means within a sample whilst considering only one independent variable or factor. A single factor used to test the null hypothesis that the means of several papulations are all equal.

Table 8.15 Analysis of Variance Attractiveness of Thematic Parks

ANOVA: Single Factor

SUMMARY

Groups	Count	Sum	Average	Variance
User/Community	10	0.8195593	0.081956	0.001103
Activities	10	0.6878566	0.068786	0.001119
Facilities	10	0.8105613	0.081056	0.002667
Atmosphere	10	0.7117668	0.071177	0.000924

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	0.001	3	0.000454	0.312126	0.816474	2.866266
Within Groups	0.052	36	0.001453			
Total	0.054	39				

From Table 8.15 shows the conclusion of importance factor of attractiveness thematic parks from four category there are not significant differences between the means. The one-way ANOVA compares the means between the groups are interested in and determines whether any of those means are statistically significantly different from each other. Specifically, it tests the null hypothesis:

$$H_0: \mu_1 = \mu_2 = \mu_3 = \cdots = \mu_k$$

Where μ = group mean and k = number of groups. If, however, the one-way ANOVA returns a statistically significant result, we accept the alternative hypothesis (HA), which is that there are at least two group means that are statistically significantly different from each other.

The result shows that F < F-Crit, we accept the null hypothesis. This case, 0.312 < 2.866, we accept null hypothesis. The means of the four population are equal. We can used that the attractiveness of thematic parks are 4 factor, "user/community", "activities", "facilities", and "atmosphere".
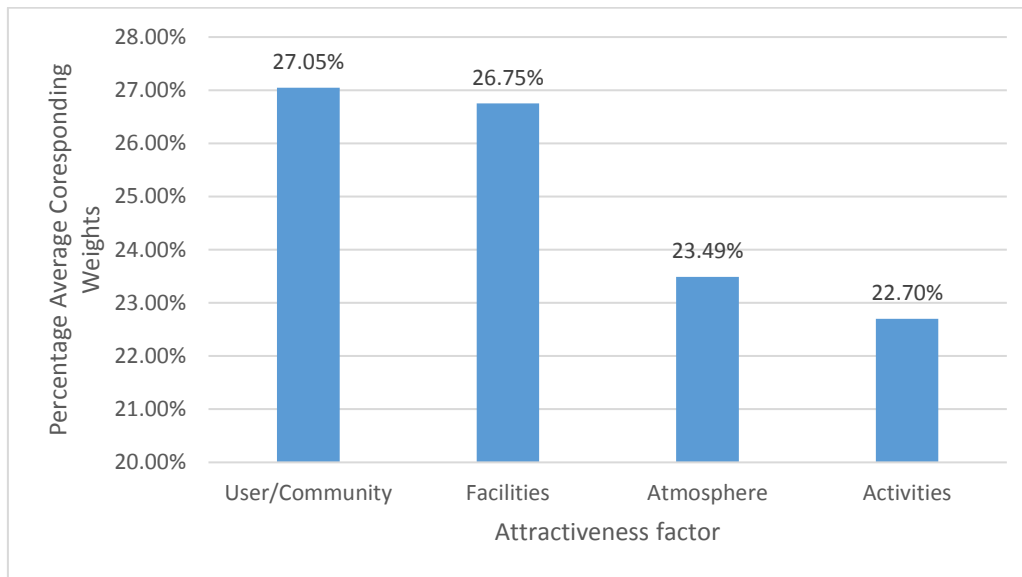
Figure 8.15 Distribution of Percentage Attractiveness Factor of Thematic Parks

Figure 8.15 shows that the dominant attractiveness factor of thematic parks is user/community factor. The uniqueness and attractiveness of thematic parks invite visitors to come from many regions even from outside the city of Bandung [12]. One of the purposes of thematic park in Bandung is to make a different design of park based on visitor characteristic.

8.6 Section Conclusion

This chapter confirms the capacity of online reviews to understanding of attractiveness of thematic parks. Online reviews show great information to assess landscape as there are volumes data available which implicitly shows public opinions though text. Based on the topic extraction found, to developing or improving of the park.

We used analysis of variance to identification that assume that attractiveness factor of thematic park are "user/community factor", "activities factor", "facilities factor", and "atmosphere factor". The result shows that accept null hypothesis which the four population are equal. We can used that the attractiveness of thematic parks are 4 factor, "user/community", "activities", "facilities", and "atmosphere".

Dominant factor attractiveness from 10 thematic parks, Superhero Park is facilities factor with 34.15%, Centrum Music Park is atmosphere factor (28.18%), Photo Park is Facilities factor (29.48%), Gesit Park is atmosphere factor (35.77%), Fitness Park is activities factor (27.52%), Jomblo Park is activities factor (33.43%), Film Park is activities factor (40.40%), Lansia Park is user/community factor (35.43%), Pet Park is user/community factor (41.50%), and Inclusion Park is user/community factor (20.29%), but percentage corresponding weight is not significant different each factor from 10 thematic parks.

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Based on the result of topic extraction that the attractiveness of the thematic park can to conclude that there are 4 categories in the attraction of thematic parks namely user or group communities, facilities, activities, and atmosphere. Dominant factor attractiveness of thematic parks is user/community factor, related to one of purpose of thematic park in Bandung is make different design of park based on visitor characteristic.

Particularly, the attractiveness summarization of 10 thematic parks as an example shows that the availability of diverse activities in the park is influenced by the availability of facilities supporting the concept of the thematic park. Moreover, providing space for the community in the form of a thematic park concept generate a special attraction for visitors to visit thematic parks. Thematic concepts in the park provide an attraction with provision of facilities in realizing the purpose of the thematic park that was built. The result of this analysis are expected to be important information in the development of the park, especially in the provision of parks with the thematic concept.

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Chapter 9. Conclusions

9.1 Conclusions

In this dissertation, we investigate park visitor perception through social network data to develop place branding. Social networks data shows great promise in assessing visitors' perceptions as there are large volumes of data available online which implicitly demonstrate user's attitudes and emotions using text. The aims of this study are to investigate parks visitors' perceptions using social networks data to develop place branding and to evaluate if the existing parks correlates to other determinant factors in the place branding. From the research result in the previous chapter it is clear that dataset has significant benefits in this regard. Based on the results of investigations from visitors perceptions of park based on social network data we found:

1. Chapter 1. This chapter elaborates the introduction of the research. Bandung has its own approach to build city's image. This city creates its image trough the development of public city parks. The provision of parks in the residential areas of the city of Bandung has experienced a radical paradigm shift: parks have become a key attraction at the city service scale and provide entertainment and recreation for urban communities through their new physical design and attractive facilities. One of the concepts used to promote parks to people is place branding. It is done by revitalizing public spaces into several thematic parks. This strategy has helped Bandung stand out from other cities and has improved the city's branding.

2. Chapter 2. This chapter provides information gathered from the literature review which elaborates the city branding and place branding, the strategies of the place branding for public parks, visitors perceptions, and online reviews of social network. Urban parks are now viewed as an important part of the broader structure of urban and neighborhood development rather than just recreation and leisure facilities. Visitor provides support to improve place brands, as well as a device that especially helpful in brand effort. Nowadays the most important influence in decision making in most markets for customers is represented by the information found online. The Internet has made possible a more varied and detailed form of information for destination places: cities, regions and countries than it had ever existed before. Although online opinions can be found using the traditional opinion method, this reverse form is inadequate given the large volume information generated on social networking sites. This fact underlines the relevance of data mining techniques agreed upon in mining social opinion network site.

3. Chapter 3. This chapter describe the study area, the concept of thematic parks as place branding strategies, park visitor's perceptions data collection from online reviews, and analysis text mining

method of reviewer's perceptions. Ten thematic parks were taken as samples. Then information about user's reviews from social network Google Maps was collected and analyzed using text mining method. From the opinion data we calculated the brand reputation of the park and understanding the attractiveness keywords of thematic parks.

4. Chapter 4. This chapter elaborates text analysis process on the social network providing excellent source data and insight determining brand reputation. When a person searches for online, they will develop a first impression based on what they find, especially on the first one or two pages of search results. Regularly monitoring the reputation score helps to improve operations, performance and users experience. Then, sentiment analysis was used to evaluate visitor's opinion and attitudes towards their brand and services. Superhero Park with total reviews 755, brand reputation score is 74.50 % predicate positive more than negative is mean brand with all positive mentions. Centrum Music Park with 390 reviews, brand reputation score is 78.97% positive, predicate positive more than negative, reputation is positive or good. Photo Park with 391 reviews, brand reputation score is 73.40 % positive, positive more than negative reputation is good. Gesit Park with 78 reviews, brand reputation score is 69.23% positive, reputation is good. Fitness Park with 185 reviews, brand reputation score is 68.11% positive, reputation is good. Jomblo Park with total 631 reviews, brand reputation score is 65.30 %, reputation is good. Film Park with total 710 reviews, brand reputation score is 68.17 % positive, reputation is good. Lansia Park with 1411 reviews, brand reputation score is 77.11% is positive, represents a (rare, unicorn) brand with all positive mentions. Pet Park with 202 reviews, brand reputation score is 57.92 %, represents a brand with all positive mentions. Inclusion Park with 30 reviews, reputation score is 53.33 % positive, represents a brand with all positive mentions. From 10 thematic parks we can see that based on the brand reputation score, Centrum Music Park is a park with the stronger brand reputation. The score of brand reputation from 10 thematic parks in Bandung is 68.60%. This shows that thematic parks have a good reputation, but with the acquisition of these values, it becomes a reference in improving the quality of the park.

5. Chapter 5. The aims of this chapter are to identify the effectiveness of thematic parks in creating a branding of the places in the city of Bandung and to determine the perceptions of the community about thematic parks through social network by rating reviews. We collected data from online reviews from users of Google maps based on the locations of the parks. Based on the number of total reviews we compared thematic parks with normal parks in same districts. The influence of the park provides a special attraction to visitors. If each user review presents a noisy signal of quality, then having many reviews should cause the overall rating to contain more information and hence have a larger impact. We found that thematic parks are effective for the place branding

of a city. The large distinction in the number of the reviewers between thematic parks and non-thematic parks can be interpreted that the thematic parks are more attractive than the other ones. The rating distribution of the review summary shows that there are 10 thematic parks with very good ratings (average score: 4.1 out of 5.0). The number of reviews can affect the rating of the brand. The greater the number of reviews will provide better information about the rating of a brand. A good rating affects the user to visit the park and be taken into consideration before visiting the place. The effectiveness of branding can be measured from the ratings obtained and the influence of brands on users based on their opinions. The naming of parks according to their theme and uniqueness as a place branding strategy influences visitors to share their experiences and perceptions on online reviews, which can be used as a consideration and reference for visitors who are considering visiting thematic parks. A good review and rating will have a major influence on introducing a place brand that promotes visitors to visit a particular thematic park. The availability of information through social network will facilitate the process of collecting data in the form of opinions from park users. The more review data will provide better information.

6. Chapter 6. This chapter contains how to use data from the reviewers' opinion and expectation to be a tool to determine the perceptions of visitors. Subsequently, this chapter also contain opinions in accordance with visitors' perception. We used text analysis to find out opinions from visitors through online reviews. Based on a summary of park opinion that the frequency of positive reviews is more dominant than negative reviews. This shows that the park's opinion is very good from visitors despite negative opinions. From the opinion of user, it can be concluded that the average of 10 thematic parks get good opinions from reviews, but the problem that can be seen from 10 thematic parks are the same, maintenance and cleanliness of the park. Based on a summary of park opinion that the frequency of positive reviews is more dominant than negative reviews. The result can be used as consideration to develop park's attractiveness.

7. Chapter 7. The purpose of this chapter is to discuss the result of filed survey to confirm finding attained from online reviews of thematic parks in Bandung city. The greatest (52.80 %; n= 481) number of respondents were between 15 to 25 years old. A majority (38.97 %; n= 355) number of respondents were student. Based on the results of a survey of 10 thematic parks with 911 respondents we found that, The percentage distribution distance respondents home to park, where 36 % respondents with a distance of over than 5 km, this indicates that the park is not only used by residents but also for outside residents. Our study reveals some similar result in both sentiment opinion and brand reputation from online reviews data with survey reviews data. Average sentiment positive from online reviews and survey reviews data more than sentiment negative. Brand reputation online reviews data (77.86 % positive sentiment), brand reputation survey reviews data (73 % positive sentiment). Compares the p-value (0.27) to significance level (0.05)

sentiment form online reviews data and survey reviews data, tell that cannot reject the null hypothesis because p > 0.05 (means are the same). Compares Brand Reputation online reviews data and survey reviews data, the p-value (0.37) to significance level (0.05) and tell that cannot reject the null hypothesis because p > 0.05 (means are the same).

8. Chapter 8. Our approach is to evaluate visitor's perceptions by identifying topic from opinions or reviews regarding the fulfillment of thematic park functions based on its user/visitor, facilities, community activities and aesthetic of the park. Based on the topic extraction found, to developing or improving of the park. We used analysis of variance to identification that assume that attractiveness factor of thematic park are "user/community factor", "activities factor", "facilities factor", and "atmosphere factor". The result shows that F < F-Crit, we accept the null hypothesis. This case, 0.312 < 2.866, we accept null hypothesis. The means of the four population are equal. We can used that the attractiveness of thematic parks are 4 factor, "user/community", "activities", "facilities", and "atmosphere". Based on the result of topic extraction that the attractiveness of the thematic park can to conclude that there are 4 categories in the attraction of thematic parks namely user or group communities, facilities, activities, and atmosphere. Dominant factor attractiveness of thematic parks is user/community factor, related to one of purpose of thematic park in Bandung is make different design of park based on visitor characteristic.

9.2 Recommendations

Even though our study was carefully designed, the conclusions are still subject to several limitations that need further research attention. The first challenge in selecting appropriate coverage social networks includes better stakeholder representatives and key issues. This dissertation investigates social network data that is available and accessible using online reviews of Google Maps users.

This research is expected to be a reference material in the evaluation process of the development of the park in particular and the improvement of place branding strategies. The development of a system of monitoring opinions from users can be done by utilizing the text analysis method in evaluating place branding strategies in particular, but also for monitoring other strategies in urban development policies.

Appendix 1. Distribution of Brand Reputation Score 10 Thematic Parks in Bandung City

1. Superhero Park Reviews

Table A1.1 Distribution of Sentiment Analysis Online Reviews of Superhero Park

Reviews	Sentiment Score	Sentiment Predicate	Reviews	Sentiment Score	Sentiment Predicate	Reviews	Sentiment Score	Sentiment Predicate
(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R1	0.996495366	positive	R51	0.871101	positive	R101	0.6955673	Positive
R2	0.999065578	positive	R52	0.7666005	positive	R102	0.7315396	positive
R3	0.933164239	positive	R53	0.7334054	positive	R103	0.7860817	positive
R4	0.336342335	negative	R54	0.7472749	positive	R104	0.7900416	positive
R5	0.858531177	positive	R55	0.7891077	positive	R105	0.7693409	positive
R6	0.978348136	positive	R56	0.8793865	positive	R106	0.8305485	positive
R7	0.877631485	positive	R57	0.8506216	positive	R107	0.5767471	neutral
R8	0.68053025	positive	R58	0.8509603	positive	R108	0.6611001	positive
R9	0.940554857	positive	R59	0.7223258	positive	R109	0.7472749	positive
R10	0.747274876	positive	R60	0.8511491	positive	R110	0.6611001	positive
R11	0.724578142	positive	R61	0.955786	positive	R111	0.8305485	positive
R12	0.933798492	positive	R62	0.6128173	positive	R112	0.6837473	positive
R13	0.8186391	positive	R63	0.6533775	positive	R113	0.7317503	positive
R14	0.723234951	positive	R64	0.8539953	positive	R114	0.7472749	positive
R15	0.231967211	negative	R65	0.609373	positive	R115	0.7602156	positive
R16	0.647672057	positive	R66	0.7891077	positive	R116	0.6611001	positive
R17	0.862750888	positive	R67	0.8976837	positive	R117	0.5510731	neutral
R18	0.946000159	positive	R68	0.9038923	positive	R118	0.673467	positive
R19	0.909292042	positive	R69	0.335954	negative	R119	0.6611001	positive
R20	0.722182274	positive	R70	0.734827	positive	R120	0.279546	negative
R21	0.816223145	positive	R71	0.7820512	positive	R121	0.9566203	positive
R22	0.857902229	positive	R72	0.7602156	positive	R122	0.4795477	neutral
R23	0.599207044	neutral	R73	0.8305485	positive	R123	0.0672111	negative
R24	0.018936809	negative	R74	0.719719	positive	R124	0.2725639	negative
R25	0.804916501	positive	R75	0.4578347	neutral	R125	0.5299938	neutral
R26	0.804869533	positive	R76	0.8897497	positive	R126	0.9950039	positive
R27	0.815075755	positive	R77	0.8539953	positive	R127	0.7371258	positive
R28	0.770601869	positive	R78	0.6611001	positive	R128	0.6345189	positive
R29	0.903207064	positive	R79	0.6878509	positive	R129	0.1199907	negative
R30	0.903136134	positive	R80	0.6611001	positive	R130	0.6589883	positive
R31	0.725607872	positive	R81	0.7205824	positive	R131	0.0052084	negative
R32	0.660508335	positive	R82	0.673467	positive	R132	0.0514003	negative
R33	0.747274876	positive	R83	0.8376632	positive	R133	0.0105512	negative

(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R34	0.769340932	positive	R84	0.72304	positive	R134	0.0343162	negative
R35	0.822233856	positive	R85	0.7365587	positive	R135	0.8575298	positive
R36	0.836304843	positive	R86	0.7123455	positive	R136	0.1706297	negative
R37	0.69556731	positive	R87	0.7221823	positive	R137	0.94788	positive
R38	0.631871998	positive	R88	0.4482422	negative	R138	0.1563747	negative
R39	0.910377681	positive	R89	0.7472749	positive	R139	0.8906755	positive
R40	0.867294073	positive	R90	0.7789911	positive	R140	0.9903922	positive
R41	0.843406379	positive	R91	0.7959946	positive	R141	0.6820913	positive
R42	0.861247301	positive	R92	0.2331212	negative	R142	0.0651366	negative
R43	0.82073164	positive	R93	0.6611001	positive	R143	0.6122208	positive
R44	0.830548525	positive	R94	0.7105989	positive	R144	0.0394263	negative
R45	0.869927764	positive	R95	0.2381672	negative	R145	0.9529575	positive
R46	0.923346043	positive	R96	0.2043323	negative	R146	0.3244047	negative
R47	0.830548525	positive	R97	0.667113	positive	R147	0.475753	neutral
R48	0.69556731	positive	R98	0.8305485	positive	R148	0.6458534	positive
R49	0.794056177	positive	R99	0.7221823	positive	R149	0.8872101	positive
R50	0.594359815	neutral	R100	0.8642384	positive	R150	0.7086327	positive
R151	0.094757527	negative	R201	0.8473346	positive	R251	0.8917401	positive
R152	0.21677117	negative	R202	0.8315976	positive	R252	0.6611001	positive
R153	0.904044926	positive	R203	0.8366154	positive	R253	0.6725241	positive
R154	0.214942172	negative	R204	0.8805048	positive	R254	0.3391852	negative
R155	0.765811682	positive	R205	0.050546	negative	R255	0.8244402	positive
R156	0.96473527	positive	R206	0.8183562	positive	R256	0.5984917	neutral
R157	0.753304005	positive	R207	0.6611001	positive	R257	0.8595613	positive
R158	0.799246609	positive	R208	0.7491748	positive	R258	0.4755576	neutral
R159	0.836063206	positive	R209	0.8283274	positive	R259	0.431259	negative
R160	0.999726474	positive	R210	0.5983742	neutral	R260	0.8756939	positive
R161	0.926721632	positive	R211	0.8915755	positive	R261	0.8917748	positive
R162	0.698828876	positive	R212	0.6611001	positive	R262	0.8183548	positive
R163	0.084771037	negative	R213	0.8189215	positive	R263	0.8631145	positive
R164	0.29482469	negative	R214	0.8541169	positive	R264	0.7732694	positive
R165	0.626731038	positive	R215	0.7985933	positive	R265	0.8255899	positive
R166	0.550603807	neutral	R216	0.1731814	negative	R266	0.6946956	positive
R167	0.185894385	negative	R217	0.6233478	positive	R267	0.6725241	positive
R168	0.650458097	positive	R218	0.7863908	positive	R268	0.7472749	positive
R169	0.715909243	positive	R219	0.654347	positive	R269	0.6611001	positive
R170	0.748254299	positive	R220	0.5543541	neutral	R270	0.6377968	positive
R171	0.500699282	neutral	R221	0.7896885	positive	R271	0.7900416	positive
R172	0.675546706	positive	R222	0.6067187	positive	R272	0.6434026	positive
R173	0.848070383	positive	R223	0.0017397	negative	R273	0.6348963	positive
R174	0.600800872	positive	R224	0.9159368	positive	R274	0.64358	positive

(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R175	0.66110009	positive	R225	0.4479553	negative	R275	0.1924034	negative
R176	0.837509871	positive	R226	0.7472749	positive	R276	0.6629603	positive
R177	0.978909791	positive	R227	0.8799529	positive	R277	0.8095466	positive
R178	0.736930847	positive	R228	0.3357951	negative	R278	0.6256196	positive
R179	0.256966472	negative	R229	0.6039878	positive	R279	0.3063269	negative
R180	0.932242393	positive	R230	0.8693094	positive	R280	0.8222093	positive
R181	0.309912205	negative	R231	0.7260339	positive	R281	0.7610723	positive
R182	0.833631694	positive	R232	0.6130159	positive	R282	0.6465535	positive
R183	0.551232338	neutral	R233	0.86055	positive	R283	0.2476974	negative
R184	0.707984984	positive	R234	0.6405727	positive	R284	0.8079433	positive
R185	0.574458122	neutral	R235	0.9648273	positive	R285	0.6322848	positive
R186	0.887513638	positive	R236	0.6572336	positive	R286	0.6535164	positive
R187	0.645130575	positive	R237	0.8179327	positive	R287	0.1727174	negative
R188	0.676966667	positive	R238	0.0415525	negative	R288	0.6936856	positive
R189	0.797769189	positive	R239	0.6599259	positive	R289	0.6176656	positive
R190	0.863030195	positive	R240	0.0278894	negative	R290	0.7048529	positive
R191	0.459186286	neutral	R241	0.7028774	positive	R291	0.8317216	positive
R192	0.541458964	neutral	R242	0.6720263	positive	R292	0.3542905	negative
R193	0.451992184	neutral	R243	0.735078	positive	R293	0.8739679	positive
R194	0.722885966	positive	R244	0.4335805	negative	R294	0.8584435	positive
R195	0.506132305	neutral	R245	0.8366903	positive	R295	0.1803564	negative
R196	0.241458908	negative	R246	0.8394278	positive	R296	0.7547523	positive
R197	0.639332473	positive	R247	0.5354115	neutral	R297	0.7144135	positive
R198	0.152276337	negative	R248	0.5743622	neutral	R298	0.5410363	neutral
R199	0.894653678	positive	R249	0.6467982	positive	R299	0.9927315	positive
R200	0.895559788	positive	R250	0.638789	positive	R300	0.6533777	positive
R301	0.846662283	positive	R351	0.048435	negative	R401	0.8077182	positive
R302	0.755100906	positive	R352	0.8611075	positive	R402	0.8403432	positive
R303	0.881304383	positive	R353	0.7118506	positive	R403	0.4359544	negative
R304	0.332113653	negative	R354	0.8786255	positive	R404	0.7232556	positive
R305	0.65464133	positive	R355	0.7001609	positive	R405	0.6611001	positive
R306	0.208544552	negative	R356	0.9092576	positive	R406	0.7849041	positive
R307	0.828884661	positive	R357	0.7602156	positive	R407	0.6725241	positive
R308	0.704700828	positive	R358	0.6725241	positive	R408	0.6126738	positive
R309	0.181901261	negative	R359	0.8160626	positive	R409	0.8326826	positive
R310	0.295147419	negative	R360	0.7145107	positive	R410	0.6931424	positive
R311	0.613723218	positive	R361	0.8304217	positive	R411	0.7343621	positive
R312	0.998239934	positive	R362	0.1776465	negative	R412	0.700859	positive
R313	0.975770295	positive	R363	0.9312	positive	R413	0.7472749	positive
R314	0.899309397	positive	R364	0.9692937	positive	R414	0.2057488	negative
R315	0.790434539	positive	R365	0.8170518	positive	R415	0.1337883	negative

(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R316	0.768223584	positive	R366	0.7698219	positive	R416	0.8060926	positive
R317	0.66110009	positive	R367	0.6584553	positive	R417	0.870509	positive
R318	0.694114149	positive	R368	0.5941349	neutral	R418	0.8627005	positive
R319	0.744269371	positive	R369	0.5080201	neutral	R419	0.6376909	positive
R320	0.710112631	positive	R370	0.6660952	positive	R420	0.6611001	positive
R321	0.706057549	positive	R371	0.6597733	positive	R421	0.6467982	positive
R322	0.69556731	positive	R372	0.5886265	neutral	R422	0.8062955	positive
R323	0.636619568	positive	R373	0.1765797	negative	R423	0.7834111	positive
R324	0.672524095	positive	R374	0.700859	positive	R424	0.7796876	positive
R325	0.76021558	positive	R375	0.6956682	positive	R425	0.8069452	positive
R326	0.721608639	positive	R376	0.7867488	positive	R426	0.7421041	positive
R327	0.734066904	positive	R377	0.1948659	negative	R427	0.6660952	positive
R328	0.807883799	positive	R378	0.7472749	positive	R428	0.806593	positive
R329	0.703200758	positive	R379	0.8705669	positive	R429	0.8044971	positive
R330	0.874308646	positive	R380	0.0025037	negative	R430	0.700859	positive
R331	0.88072288	positive	R381	0.817862	positive	R431	0.7685438	positive
R332	0.731539011	positive	R382	0.7076809	positive	R432	0.6336642	positive
R333	0.66110009	positive	R383	0.8636994	positive	R433	0.7472749	positive
R334	0.728357911	positive	R384	0.7212692	positive	R434	0.9044129	positive
R335	0.045810141	negative	R385	0.7091035	positive	R435	0.791711	positive
R336	0.642743766	positive	R386	0.7309082	positive	R436	0.7260341	positive
R337	0.214200363	negative	R387	0.7060006	positive	R437	0.7131116	positive
R338	0.204855651	negative	R388	0.3728563	negative	R438	0.8980995	positive
R339	0.957307458	positive	R389	0.8883645	positive	R439	0.8361514	positive
R340	0.75458461	positive	R390	0.6776155	positive	R440	0.7472749	positive
R341	0.929231822	positive	R391	0.8045077	positive	R441	0.1573854	negative
R342	0.637190521	positive	R392	0.6554334	positive	R442	0.6811942	positive
R343	0.84344703	positive	R393	0.7400668	positive	R443	0.7818762	positive
R344	0.898615122	positive	R394	0.3781204	negative	R444	0.3708777	negative
R345	0.590800941	neutral	R395	0.8149769	positive	R445	0.1049818	negative
R346	0.811064839	positive	R396	0.2663306	negative	R446	0.829424	positive
R347	0.790851831	positive	R397	0.8072001	positive	R447	0.7456732	positive
R348	0.832400024	positive	R398	0.6611001	positive	R448	0.464129	neutral
R349	0.808566928	positive	R399	0.7880361	positive	R449	0.8015278	positive
R350	0.363164634	negative	R400	0.5149321	neutral	R450	0.7596943	positive
R451	0.840862453	positive	R501	0.8339063	positive	R551	0.7472749	positive
R452	0.881611347	positive	R502	0.6732944	positive	R552	0.032926	negative
R453	0.580403686	neutral	R503	0.7019814	positive	R553	0.8067663	positive
R454	0.744608581	positive	R504	0.7836282	positive	R554	0.8373383	positive
R455	0.865198314	positive	R505	0.7494996	positive	R555	0.8305485	positive
R456	0.694760025	positive	R506	0.8879352	positive	R556	0.6611001	positive

(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R457	0.304786265	negative	R507	0.7752787	positive	R557	0.7472749	positive
R458	0.66110009	positive	R508	0.8128789	positive	R558	0.7318707	positive
R459	0.892091691	positive	R509	0.9464002	positive	R559	0.8540023	positive
R460	0.370776027	negative	R510	0.6467982	positive	R560	0.7908518	positive
R461	0.845034122	positive	R511	0.8257665	positive	R561	0.7699696	positive
R462	0.740379632	positive	R512	0.6725241	positive	R562	0.6518931	positive
R463	0.48165977	neutral	R513	0.7152519	positive	R563	0.92426	positive
R464	0.546925187	neutral	R514	0.6312867	positive	R564	0.8074765	positive
R465	0.262195945	negative	R515	0.8520846	positive	R565	0.8208905	positive
R466	0.819252491	positive	R516	0.4654191	neutral	R566	0.7908518	positive
R467	0.793898225	positive	R517	0.6884712	positive	R567	0.8771141	positive
R468	0.837663174	positive	R518	0.700859	positive	R568	0.6839604	positive
R469	0.699897707	positive	R519	0.68951	positive	R569	0.7106798	positive
R470	0.830548525	positive	R520	0.6611001	positive	R570	0.700859	positive
R471	0.612673581	positive	R521	0.8540114	positive	R571	0.8110648	positive
R472	0.873645008	positive	R522	0.8352163	positive	R572	0.6830516	positive
R473	0.3739779	negative	R523	0.6913279	positive	R573	0.733322	positive
R474	0.35147202	negative	R524	0.7385179	positive	R574	0.6611001	positive
R475	0.121981516	negative	R525	0.2244136	negative	R575	0.4756717	neutral
R476	0.798816383	positive	R526	0.7725176	positive	R576	0.7423385	positive
R477	0.790702522	positive	R527	0.6264243	positive	R577	0.6611001	positive
R478	0.939609051	positive	R528	0.5914776	neutral	R578	0.8203468	positive
R479	0.681684256	positive	R529	0.5366037	neutral	R579	0.6611001	positive
R480	0.66110009	positive	R530	0.5540043	neutral	R580	0.6816879	positive
R481	0.638927698	positive	R531	0.7478315	positive	R581	0.6929397	positive
R482	0.684121847	positive	R532	0.6611001	positive	R582	0.6450828	positive
R483	0.76021558	positive	R533	0.5741287	neutral	R583	0.7064437	positive
R484	0.710112631	positive	R534	0.7019814	positive	R584	0.7867811	positive
R485	0.058231704	negative	R535	0.5960347	neutral	R585	0.8501304	positive
R486	0.824386895	positive	R536	0.6068705	positive	R586	0.9032156	positive
R487	0.76021558	positive	R537	0.6963331	positive	R587	0.7888608	positive
R488	0.788459539	positive	R538	0.6282055	positive	R588	0.7812609	positive
R489	0.787770033	positive	R539	0.654347	positive	R589	0.7131453	positive
R490	0.707553864	positive	R540	0.6762876	positive	R590	0.6762879	positive
R491	0.66110009	positive	R541	0.7209007	positive	R591	0.9375467	positive
R492	0.803232372	positive	R542	0.8811417	positive	R592	0.8574249	positive
R493	0.681890965	positive	R543	0.6611001	positive	R593	0.7400782	positive
R494	0.975038707	positive	R544	0.7950767	positive	R594	0.7629929	positive
R495	0.79384625	positive	R545	0.9445145	positive	R595	0.7298877	positive
R496	0.830491185	positive	R546	0.7221823	positive	R596	0.7285202	positive
R497	0.710990489	positive	R547	0.6892281	positive	R597	0.6886631	positive

(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R498	0.687441707	positive	R548	0.6725241	positive	R598	0.4214516	negative
R499	0.700858951	positive	R549	0.6467982	positive	R599	0.6762876	positive
R500	0.56395793	neutral	R550	0.7671581	positive	R600	0.4977787	neutral
R601	0.66110009	positive	R651	0.4295195	negative	R701	0.7068849	positive
R602	0.849561393	positive	R652	0.6611001	positive	R702	0.8422717	positive
R603	0.711853027	positive	R653	0.5957415	neutral	R703	0.6229642	positive
R604	0.225442365	negative	R654	0.6833869	positive	R704	0.7718276	positive
R605	0.747274876	positive	R655	0.7921231	positive	R705	0.8305485	positive
R606	0.825463414	positive	R656	0.6884931	positive	R706	0.6762876	positive
R607	0.651893139	positive	R657	0.659315	positive	R707	0.4615198	neutral
R608	0.747274876	positive	R658	0.6518931	positive	R708	0.6751586	positive
R609	0.726791739	positive	R659	0.6956682	positive	R709	0.0828321	negative
R610	0.600672901	positive	R660	0.8743531	positive	R710	0.6504603	positive
R611	0.052365538	negative	R661	0.5360767	neutral	R711	0.6954409	positive
R612	0.546925187	neutral	R662	0.6773376	positive	R712	0.6858402	positive
R613	0.798828781	positive	R663	0.5771949	neutral	R713	0.4615745	neutral
R614	0.752515972	positive	R664	0.8322492	positive	R714	0.827751	positive
R615	0.697680771	positive	R665	0.8345981	positive	R715	0.5862879	neutral
R616	0.747274876	positive	R666	0.6457635	positive	R716	0.7583883	positive
R617	0.736142933	positive	R667	0.6611001	positive	R717	0.7084399	positive
R618	0.606870532	positive	R668	0.8194139	positive	R718	0.7662628	positive
R619	0.790041566	positive	R669	0.6726828	positive	R719	0.6402168	positive
R620	0.802583933	positive	R670	0.7376071	positive	R720	0.6952645	positive
R621	0.747274876	positive	R671	0.681444	positive	R721	0.6611001	positive
R622	0.912827909	positive	R672	0.7472749	positive	R722	0.6762884	positive
R623	0.738390863	positive	R673	0.225839	negative	R723	0.0669958	negative
R624	0.783578455	positive	R674	0.1083396	negative	R724	0.636228	positive
R625	0.780422747	positive	R675	0.7340574	positive	R725	0.7123455	positive
R626	0.747274876	positive	R676	0.6807921	positive	R726	0.839391	positive
R627	0.676039338	positive	R677	0.7891082	positive	R727	0.7574047	positive
R628	0.835017383	positive	R678	0.6793031	positive	R728	0.7718305	positive
R629	0.790041566	positive	R679	0.6043473	positive	R729	0.7019814	positive
R630	0.656176567	positive	R680	0.8360912	positive	R730	0.6860597	positive
R631	0.468977004	neutral	R681	0.7472749	positive	R731	0.7777193	positive
R632	0.584721148	neutral	R682	0.7995822	positive	R732	0.460666	neutral
R633	0.952281892	positive	R683	0.579251	neutral	R733	0.3751384	negative
R634	0.509203792	neutral	R684	0.7219085	positive	R734	0.8848594	positive
R635	0.726092637	positive	R685	0.4180727	negative	R735	0.6957691	positive
R636	0.839693367	positive	R686	0.7611447	positive	R736	0.6232159	positive
R637	0.748638928	positive	R687	0.7066664	positive	R737	0.8579345	positive
R638	0.808715701	positive	R688	0.8203468	positive	R738	0.8567909	positive

(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R639	0.837577879	positive	R689	0.8653624	positive	R739	0.7525587	positive
R640	0.775285423	positive	R690	0.6467982	positive	R740	0.7472749	positive
R641	0.66110009	positive	R691	0.7275239	positive	R741	0.6611001	positive
R642	0.709008098	positive	R692	0.6611001	positive	R742	0.5510325	neutral
R643	0.747274876	positive	R693	0.5931017	neutral	R743	0.6611001	positive
R644	0.581679463	neutral	R694	0.6874417	positive	R744	0.6915809	positive
R645	0.671515167	positive	R695	0.6611001	positive	R745	0.5085518	neutral
R646	0.728560209	positive	R696	0.7591836	positive	R746	0.7469648	positive
R647	0.740379632	positive	R697	0.7285705	positive	R747	0.6611001	positive
R648	0.158277258	negative	R698	0.6425713	positive	R748	0.6371679	positive
R649	0.715019107	positive	R699	0.7602156	positive	R749	0.7371802	positive
R650	0.707962096	positive	R700	0.7916549	positive	R750	0.6217044	positive
R751	0.76021558	Positive	R753	0.6728726	positive	R755	0.6818909	positive
R752	0.66110009	positive	R754	0.7472748	positive			

2. Centrum Music Park Reviews

Table A1.2 Distribution of Sentiment Analysis Online Reviews of Centrum Music Park

Reviews	Sentiment Score	Sentiment Predicate	Reviews	Sentiment Score	Sentiment Predicate	Reviews	Sentiment Score	Sentiment Predicate
(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R1	0.920221	positive	R101	0.783771	positive	R201	0.763646	positive
R2	0.741396	positive	R102	0.794027	positive	R202	0.6611	positive
R3	0.489939	neutral	R103	0.830549	positive	R203	0.74865	positive
R4	0.402437	negative	R104	0.895607	positive	R204	0.815162	positive
R5	0.942389	positive	R105	0.686584	positive	R205	0.492277	neutral
R6	0.670796	positive	R106	0.652515	positive	R206	0.7913	positive
R7	0.784611	positive	R107	0.763692	positive	R207	0.672524	positive
R8	0.836364	positive	R108	0.770899	positive	R208	0.722182	positive
R9	0.863184	positive	R109	0.645746	positive	R209	0.6611	positive
R10	0.292184	negative	R110	0.885048	positive	R210	0.760216	positive
R11	0.839097	positive	R111	0.6611	positive	R211	0.686315	positive
R12	0.736809	positive	R112	0.640625	positive	R212	0.752501	positive
R13	0.938119	positive	R113	0.752986	positive	R213	0.691342	positive
R14	0.839785	positive	R114	0.916096	positive	R214	0.613911	positive
R15	0.674172	positive	R115	0.845657	positive	R215	0.112604	negative
R16	0.853922	positive	R116	0.835338	positive	R216	0.635749	positive
R17	0.424713	negative	R117	0.445462	negative	R217	0.667018	positive
R18	0.600473	positive	R118	0.875143	positive	R218	0.708124	positive
R19	0.676501	positive	R119	0.410668	negative	R219	0.80772	positive

(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R20	0.6245	positive	R120	0.528227	neutral	R220	0.943084	positive
R21	0.959201	positive	R121	0.745293	positive	R221	0.870179	positive
R22	0.870604	positive	R122	0.788317	positive	R222	0.744347	positive
R23	0.936274	positive	R123	0.810148	positive	R223	0.608683	positive
R24	0.885846	positive	R124	0.481352	neutral	R224	0.830549	positive
R25	0.830549	positive	R125	0.667484	positive	R225	0.6611	positive
R26	0.952038	positive	R126	0.727287	positive	R226	0.705555	positive
R27	0.63819	positive	R127	0.900487	positive	R227	0.558519	neutral
R28	0.838592	positive	R128	0.747275	positive	R228	0.53324	neutral
R29	0.803205	positive	R129	0.78313	positive	R229	0.946415	positive
R30	0.847353	positive	R130	0.6611	positive	R230	0.789108	positive
R31	0.449017	negative	R131	0.117225	negative	R231	0.631872	positive
R32	0.737391	positive	R132	0.716777	positive	R232	0.784359	positive
R33	0.743973	positive	R133	0.099445	negative	R233	0.830549	positive
R34	0.695567	positive	R134	0.140218	negative	R234	0.725608	positive
R35	0.695567	positive	R135	0.767005	positive	R235	0.742338	positive
R36	0.712346	positive	R136	0.701497	positive	R236	0.724754	positive
R37	0.650785	positive	R137	0.055461	negative	R237	0.742472	positive
R38	0.713744	positive	R138	0.793761	positive	R238	0.844169	positive
R39	0.681891	positive	R139	0.895261	positive	R239	0.852114	positive
R40	0.85209	positive	R140	0.890486	positive	R240	0.857169	positive
R41	0.729414	positive	R141	0.891897	positive	R241	0.828284	positive
R42	0.727934	positive	R142	0.662539	positive	R242	0.672524	positive
R43	0.82407	positive	R143	0.649485	positive	R243	0.901697	positive
R44	0.747275	positive	R144	0.74366	positive	R244	0.653376	positive
R45	0.681965	positive	R145	0.839893	positive	R245	0.792886	positive
R46	0.6611	positive	R146	0.890838	positive	R246	0.791025	positive
R47	0.630874	positive	R147	0.314351	negative	R247	0.556157	neutral
R48	0.807889	positive	R148	0.790042	positive	R248	0.479936	neutral
R49	0.830549	positive	R149	0.712564	positive	R249	0.6611	positive
R50	0.391421	negative	R150	0.864924	positive	R250	0.846053	positive
R51	0.695567	positive	R151	0.747275	positive	R251	0.853046	positive
R52	0.695567	positive	R152	0.758286	positive	R252	0.734265	positive
R53	0.773226	positive	R153	0.721609	positive	R253	0.733429	positive
R54	0.803205	positive	R154	0.436451	negative	R254	0.830549	positive
R55	0.659485	positive	R155	0.77321	positive	R255	0.823988	positive
R56	0.630851	positive	R156	0.693298	positive	R256	0.638928	positive
R57	0.69738	positive	R157	0.926499	positive	R257	0.91324	positive
R58	0.610825	positive	R158	0.883027	positive	R258	0.673494	positive
R59	0.761903	positive	R159	0.774534	positive	R259	0.782563	positive
R60	0.722182	positive	R160	0.695114	positive	R260	0.714608	positive

(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R61	0.74352	positive	R161	0.706931	positive	R261	0.816864	positive
R62	0.830549	positive	R162	0.350588	negative	R262	0.82575	positive
R63	0.849379	positive	R163	0.73681	positive	R263	0.572265	neutral
R64	0.830549	positive	R164	0.550746	neutral	R264	0.871403	positive
R65	0.747275	positive	R165	0.754818	positive	R265	0.747275	positive
R66	0.676288	positive	R166	0.760216	positive	R266	0.645791	positive
R67	0.500024	neutral	R167	0.715941	positive	R267	0.770897	positive
R68	0.758126	positive	R168	0.763358	positive	R268	0.602587	positive
R69	0.653135	positive	R169	0.23797	negative	R269	0.749311	positive
R70	0.760216	positive	R170	0.6611	positive	R270	0.6611	positive
R71	0.63051	positive	R171	0.260978	negative	R271	0.787004	positive
R72	0.502841	neutral	R172	0.6611	positive	R272	0.673506	positive
R73	0.747275	positive	R173	0.63942	positive	R273	0.724133	positive
R74	0.658964	positive	R174	0.790042	positive	R274	0.854621	positive
R75	0.798995	positive	R175	0.56151	neutral	R275	0.651893	positive
R76	0.883203	positive	R176	0.393169	negative	R276	0.560112	neutral
R77	0.105428	negative	R177	0.825515	positive	R277	0.778396	positive
R78	0.52799	neutral	R178	0.856801	positive	R278	0.610686	positive
R79	0.858825	positive	R179	0.324496	negative	R279	0.60653	positive
R80	0.888644	positive	R180	0.845238	positive	R280	0.935968	positive
R81	0.645753	positive	R181	0.699286	positive	R281	0.872037	positive
R82	0.687578	positive	R182	0.868772	positive	R282	0.880392	positive
R83	0.709284	positive	R183	0.792886	positive	R283	0.570693	neutral
R84	0.827754	positive	R184	0.739872	positive	R284	0.371461	negative
R85	0.869352	positive	R185	0.680262	positive	R285	0.63148	positive
R86	0.671025	positive	R186	0.840386	positive	R286	0.851033	positive
R87	0.216819	negative	R187	0.6611	positive	R287	0.6611	positive
R88	0.66401	positive	R188	0.600617	positive	R288	0.722182	positive
R89	0.095525	negative	R189	0.654347	positive	R289	0.81267	positive
R90	0.393696	negative	R190	0.403914	negative	R290	0.840748	positive
R91	0.692384	positive	R191	0.970903	positive	R291	0.818356	positive
R92	0.688585	positive	R192	0.695567	positive	R292	0.701981	positive
R93	0.865708	positive	R193	0.657009	positive	R293	0.700385	positive
R94	0.038635	negative	R194	0.811679	positive	R294	0.721609	positive
R95	0.760267	positive	R195	0.830549	positive	R295	0.701981	positive
R96	0.911047	positive	R196	0.760216	positive	R296	0.712174	positive
R97	0.870044	positive	R197	0.660793	positive	R297	0.746733	positive
R98	0.839909	positive	R198	0.760216	positive	R298	0.634896	positive
R99	0.830549	positive	R199	0.73612	positive	R299	0.63813	positive
R100	0.662166	positive	R200	0.68928	positive	R300	0.50683	neutral
R301	0.683746	positive	R331	0.701756	positive	R361	0.043336	negative

(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R302	0.659533	positive	R332	0.693374	positive	R362	0.6611	positive
R303	0.6611	positive	R333	0.6611	positive	R363	0.722182	positive
R304	0.747275	positive	R334	0.688142	positive	R364	0.6611	positive
R305	0.274179	negative	R335	0.885298	positive	R365	0.681684	positive
R306	0.6611	positive	R336	0.776399	positive	R366	0.590083	neutral
R307	0.939492	positive	R337	0.871458	positive	R367	0.6611	positive
R308	0.830549	positive	R338	0.830549	positive	R368	0.700385	positive
R309	0.6611	positive	R339	0.850018	positive	R369	0.6611	positive
R310	0.653377	positive	R340	0.734265	positive	R370	0.617889	positive
R311	0.760216	positive	R341	0.760671	positive	R371	0.749222	positive
R312	0.64667	positive	R342	0.720602	positive	R372	0.6611	positive
R313	0.866854	positive	R343	0.778971	positive	R373	0.830549	positive
R314	0.809707	positive	R344	0.39367	negative	R374	0.784299	positive
R315	0.102779	negative	R345	0.721609	positive	R375	0.842921	positive
R316	0.690262	positive	R346	0.667535	positive	R376	0.6611	positive
R317	0.825427	positive	R347	0.69748	positive	R377	0.6611	positive
R318	0.928307	positive	R348	0.714996	positive	R378	0.646798	positive
R319	0.842313	positive	R349	0.753758	positive	R379	0.747275	positive
R320	0.931859	positive	R350	0.830549	positive	R380	0.760216	positive
R321	0.6611	positive	R351	0.75433	positive	R381	0.795687	positive
R322	0.667588	positive	R352	0.740936	positive	R382	0.6611	positive
R323	0.796116	positive	R353	0.681685	positive	R383	0.65046	positive
R324	0.71998	positive	R354	0.6611	positive	R384	0.674409	positive
R325	0.6611	positive	R355	0.627798	positive	R385	0.631872	positive
R326	0.584969	neutral	R356	0.6611	positive	R386	0.819687	positive
R327	0.522408	neutral	R357	0.744609	positive	R387	0.720675	positive
R328	0.784916	positive	R358	0.370017	negative	R388	0.6611	positive
R329	0.760216	positive	R359	0.801409	positive	R389	0.760216	positive
R330	0.820924	positive	R360	0.830549	positive	R390	0.747275	positive

3. Photo Park Reviews

Table A1.3 Distribution of Sentiment Analysis Online Reviews of Photo Park

Reviews	Sentiment Score	Sentiment Predicate	Reviews	Sentiment Score	Sentiment Predicate	Reviews	Sentiment Score	Sentiment Predicate
(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R1	0.788639	positive	R132	0.969042	positive	R262	0.760216	positive
R2	0.894543	positive	R133	0.846942	positive	R263	0.348063	negative
R3	0.629984	positive	R134	0.581803	neutral	R264	0.830549	positive
R4	0.810671	positive	R135	0.710588	positive	R265	0.466371	neutral
R5	0.775073	positive	R136	0.6611	positive	R266	0.88806	positive
R6	0.031933	negative	R137	0.830549	positive	R267	0.709765	positive
R7	0.934384	positive	R138	0.675558	positive	R268	0.610301	positive
R8	0.487264	neutral	R139	0.834511	positive	R269	0.722182	positive
R9	0.653135	positive	R140	0.749761	positive	R270	0.233892	negative
R10	0.68777	positive	R141	0.635729	positive	R271	0.757638	positive
R11	0.641642	positive	R142	0.719809	positive	R272	0.597021	neutral
R12	0.65111	positive	R143	0.649485	positive	R273	0.73656	positive
R13	0.830549	positive	R144	0.74884	positive	R274	0.760216	positive
R14	0.695567	positive	R145	0.751939	positive	R275	0.127741	negative
R15	0.996119	positive	R146	0.698137	positive	R276	0.586998	neutral
R16	0.695241	positive	R147	0.672524	positive	R277	0.725336	positive
R17	0.830549	positive	R148	0.594889	neutral	R278	0.872677	positive
R18	0.747275	positive	R149	0.315217	negative	R279	0.6611	positive
R19	0.843406	positive	R150	0.705159	positive	R280	0.481688	neutral
R20	0.695567	positive	R151	0.821506	positive	R281	0.6611	positive
R21	0.830549	positive	R152	0.839775	positive	R282	0.640549	positive
R22	0.837209	positive	R153	0.479021	neutral	R283	0.718022	positive
R23	0.747275	positive	R154	0.089962	negative	R284	0.847501	positive
R24	0.764661	positive	R155	0.634834	positive	R285	0.344225	negative
R25	0.854925	positive	R156	0.759572	positive	R286	0.68027	positive
R26	0.797335	positive	R157	0.673468	positive	R287	0.677225	positive
R27	0.830549	positive	R158	0.6611	positive	R288	0.701981	positive
R28	0.797385	positive	R159	0.6611	positive	R289	0.830549	positive
R29	0.830549	positive	R160	0.653146	positive	R290	0.683387	positive
R30	0.722182	positive	R161	0.694674	positive	R291	0.735057	positive
R31	0.588614	neutral	R162	0.744735	positive	R292	0.6611	positive
R32	0.64472	positive	R163	0.845657	positive	R293	0.666912	positive
R33	0.63098	positive	R164	0.757372	positive	R294	0.641363	positive
R34	0.695567	positive	R165	0.697844	positive	R295	0.653377	positive
R35	0.517536	neutral	R166	0.692256	positive	R296	0.6611	positive

(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R36	0.823346	positive	R167	0.631979	positive	R297	0.739872	positive
R37	0.585926	neutral	R168	0.69476	positive	R298	0.676385	positive
R38	0.793453	positive	R169	0.756258	positive	R299	0.857332	positive
R39	0.830549	positive	R170	0.907061	positive	R300	0.696084	positive
R40	0.6611	positive	R171	0.675349	positive	R301	0.855458	positive
R41	0.653135	positive	R172	0.342655	negative	R302	0.681728	positive
R42	0.830549	positive	R173	0.883073	positive	R303	0.597888	neutral
R43	0.6611	positive	R174	0.760216	positive	R304	0.744364	positive
R44	0.849532	positive	R175	0.792807	positive	R305	0.822147	positive
R45	0.6611	positive	R176	0.765577	positive	R306	0.432033	negative
R46	0.106484	negative	R177	0.736836	positive	R307	0.691342	positive
R47	0.836224	positive	R178	0.758593	positive	R308	0.790057	positive
R48	0.046175	negative	R179	0.721548	positive	R309	0.777802	positive
R49	0.822609	positive	R180	0.691324	positive	R310	0.678396	positive
R50	0.329731	negative	R181	0.872677	positive	R311	0.613854	positive
R51	0.960523	positive	R182	0.768448	positive	R312	0.767285	positive
R52	0.201613	negative	R183	0.771124	positive	R313	0.613723	positive
R53	0.905402	positive	R184	0.869165	positive	R314	0.683452	positive
R54	0.584405	neutral	R185	0.305308	negative	R315	0.772427	positive
R55	0.944134	positive	R186	0.880018	positive	R316	0.674618	positive
R56	0.760535	positive	R187	0.6611	positive	R317	0.806366	positive
R57	0.664864	positive	R188	0.6611	positive	R318	0.643965	positive
R58	0.194881	negative	R189	0.680029	positive	R319	0.821046	positive
R59	0.926286	positive	R190	0.818859	positive	R320	0.805267	positive
R60	0.652787	positive	R191	0.954304	positive	R321	0.30876	negative
R61	0.791198	positive	R192	0.679303	positive	R322	0.830549	positive
R62	0.615636	positive	R193	0.643416	positive	R323	0.747275	positive
R63	0.851168	positive	R194	0.739872	positive	R324	0.753249	positive
R64	0.942705	positive	R195	0.853777	positive	R325	0.6611	positive
R65	0.893246	positive	R196	0.263072	negative	R326	0.616315	positive
R66	0.313961	negative	R197	0.76234	positive	R327	0.875076	positive
R67	0.842598	positive	R198	0.943442	positive	R328	0.889011	positive
R68	0.885749	positive	R199	0.760216	positive	R329	0.03996	negative
R69	0.874277	positive	R200	0.830549	positive	R330	0.9201	positive
R70	0.69951	positive	R201	0.424838	negative	R331	0.903979	positive
R71	0.786561	positive	R202	0.817817	positive	R332	0.69951	positive
R72	0.210888	negative	R203	0.603865	positive	R333	0.682331	positive
R73	0.892475	positive	R204	0.527732	neutral	R334	0.747275	positive
R74	0.796922	positive	R205	0.712626	positive	R335	0.862113	positive
R75	0.072843	negative	R206	0.852304	positive	R336	0.830549	positive
R76	0.767058	positive	R207	0.669924	positive	R337	0.619475	positive

(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R77	0.614512	positive	R208	0.63868	positive	R338	0.790042	positive
R78	0.691342	positive	R209	0.830549	positive	R339	0.6611	positive
R79	0.759368	positive	R210	0.224282	negative	R340	0.6611	positive
R80	0.721148	positive	R211	0.76726	positive	R341	0.426084	negative
R81	0.941422	positive	R212	0.7693	positive	R342	0.215666	negative
R82	0.618239	positive	R213	0.555842	neutral	R343	0.760216	positive
R83	0.331581	negative	R214	0.79032	positive	R344	0.753771	positive
R84	0.86395	positive	R215	0.826239	positive	R345	0.6611	positive
R85	0.637426	positive	R216	0.605451	positive	R346	0.6611	positive
R86	0.763842	positive	R217	0.500004	neutral	R347	0.722182	positive
R87	0.667999	positive	R218	0.830549	positive	R348	0.544032	neutral
R88	0.80383	positive	R219	0.826656	positive	R349	0.722182	positive
R89	0.975942	positive	R220	0.693887	positive	R350	0.632836	positive
R90	0.822522	positive	R221	0.848104	positive	R351	0.795929	positive
R91	0.836989	positive	R222	0.656177	positive	R352	0.757581	positive
R92	0.26432	negative	R223	0.830549	positive	R353	0.694998	positive
R93	0.759172	positive	R224	0.648553	positive	R354	0.755539	positive
R94	0.68887	positive	R225	0.68951	positive	R355	0.723255	positive
R95	0.864563	positive	R226	0.595774	neutral	R356	0.653377	positive
R96	0.116338	negative	R227	0.5711	neutral	R357	0.740813	positive
R97	0.73799	positive	R228	0.830549	positive	R358	0.830549	positive
R98	0.549004	neutral	R229	0.304164	negative	R359	0.701981	positive
R99	0.778822	positive	R230	0.747275	positive	R360	0.667471	positive
R100	0.811179	positive	R231	0.049616	negative	R361	0.695668	positive
R101	0.613158	positive	R232	0.774599	positive	R362	0.332455	negative
R102	0.846407	positive	R233	0.591751	neutral	R363	0.614908	positive
R103	0.646281	positive	R234	0.912418	positive	R364	0.643009	positive
R104	0.906048	positive	R235	0.6611	positive	R365	0.727736	positive
R105	0.747275	positive	R236	0.885538	positive	R366	0.69951	positive
R106	0.821506	positive	R237	0.496007	neutral	R367	0.6611	positive
R107	0.700513	positive	R238	0.740078	positive	R368	0.745884	positive
R108	0.824591	positive	R239	0.856763	positive	R369	0.616593	positive
R109	0.743611	positive	R240	0.824913	positive	R370	0.321086	negative
R110	0.729971	positive	R241	0.642744	positive	R371	0.672524	positive
R111	0.872697	positive	R242	0.67001	positive	R372	0.760216	positive
R112	0.874642	positive	R243	0.747275	positive	R373	0.760216	positive
R113	0.6611	positive	R244	0.710207	positive	R374	0.732207	positive
R114	0.654347	positive	R245	0.775914	positive	R375	0.822929	positive
R115	0.089425	negative	R246	0.908079	positive	R376	0.830549	positive
R116	0.820335	positive	R247	0.791041	positive	R377	0.783615	positive
R117	0.672839	positive	R248	0.654347	positive	R378	0.867371	positive

(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R118	0.90373	positive	R249	0.627161	positive	R379	0.662197	positive
R119	0.728349	positive	R250	0.908896	positive	R380	0.18055	negative
R120	0.581785	neutral	R251	0.80355	positive	R381	0.672524	positive
R121	0.417856	negative	R252	0.683053	positive	R382	0.675989	positive
R122	0.860498	positive	R253	0.746427	positive	R383	0.760216	positive
R123	0.614399	positive	R254	0.701981	positive	R384	0.672524	positive
R124	0.732288	positive	R255	0.883789	positive	R385	0.735541	positive
R125	0.325261	negative	R256	0.385131	negative	R386	0.618677	positive
R126	0.421167	negative	R257	0.731352	positive	R387	0.752849	positive
R127	0.704984	positive	R258	0.760216	positive	R388	0.747275	positive
R128	0.695354	positive	R259	0.566659	neutral	R389	0.701981	positive
R129	0.774564	positive	R260	0.760216	positive	R390	0.790042	positive
R130	0.418496	negative	R261	0.350446	negative	R391	0.830549	positive
R131	0.604352	positive						

4. Gesit Park Reviews

Table A1.4 Distribution of Sentiment Analysis Online Reviews of Gesit Park

Reviews	Sentiment Score	Sentiment Predicate	Reviews	Sentiment Score	Sentiment Predicate	Reviews	Sentiment Score	Sentiment Predicate
(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R1	0.0021357	negative	R27	0.30632687	negative	R53	0.8305485	positive
R2	0.8305485	positive	R28	0.70198143	positive	R54	0.4723386	neutral
R3	0.6955673	positive	R29	0.34763467	negative	R55	0.8679252	positive
R4	0.6955673	positive	R30	0.69111282	positive	R56	0.6372097	positive
R5	0.6531348	positive	R31	0.66110009	positive	R57	0.733948	positive
R6	0.8424897	positive	R32	0.65835166	positive	R58	0.7486252	positive
R7	0.2370279	negative	R33	0.7549811	positive	R59	0.6696862	positive
R8	0.6955673	positive	R34	0.68744218	positive	R60	0.2044655	negative
R9	0.540463	neutral	R35	0.75560373	positive	R61	0.6713809	positive
R10	0.7472749	positive	R36	0.63974661	positive	R62	0.6136899	positive
R11	0.6301768	positive	R37	0.71999669	positive	R63	0.7046641	positive
R12	0.8305485	positive	R38	0.75915766	positive	R64	0.7087979	positive
R13	0.6611001	positive	R39	0.75917184	positive	R65	0.695668	positive
R14	0.7101126	positive	R40	0.76021558	positive	R66	0.7303032	positive
R15	0.8305485	positive	R41	0.63194811	positive	R67	0.8286567	positive
R16	0.3214102	negative	R42	0.22197233	negative	R68	0.4508358	neutral
R17	0.6777593	positive	R43	0.83054852	positive	R69	0.6611001	positive
R18	0.8814452	positive	R44	0.75783008	positive	R70	0.9635484	positive

(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R19	0.8850735	positive	R45	0.7548694	positive	R71	0.7522846	positive
R20	0.0198084	negative	R46	0.63654578	positive	R72	0.7857204	positive
R21	0.7006361	positive	R47	0.66110009	positive	R73	0.614625	positive
R22	0.0506309	negative	R48	0.70933509	positive	R74	0.6611001	positive
R23	0.5224739	neutral	R49	0.12054361	negative	R75	0.751995	positive
R24	0.7738098	positive	R50	0.6721043	positive	R76	0.6783956	positive
R25	0.679172	positive	R51	0.95214838	positive	R77	0.7759849	positive
R26	0.6611001	positive	R52	0.72579771	positive	R78	0.8434064	positive

5. Fitness Park Reviews

Table A1.5 Distribution of Sentiment Analysis Online Reviews of Fitness Park

Reviews	Sentiment Score	Sentiment Predicate	Reviews	Sentiment Score	Sentiment Predicate	Reviews	Sentiment Score	Sentiment Predicate
(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R1	Score	Sentiment	R63	0.6674711	positive	R125	0.6477768	positive
R2	0.2015442	negative	R64	0.7031006	positive	R126	0.7101126	positive
R3	0.795913	positive	R65	0.2479468	negative	R127	0.8305485	positive
R4	0.5263315	neutral	R66	0.7820712	positive	R128	0.7210474	positive
R5	0.7172019	positive	R67	0.722465	positive	R129	0.6014303	positive
R6	0.8305247	positive	R68	0.8789635	positive	R130	0.9062843	positive
R7	0.7967004	positive	R69	0.43257	negative	R131	0.7950088	positive
R8	0.541079	neutral	R70	0.1809542	negative	R132	0.7472749	positive
R9	0.5469503	neutral	R71	0.841701	positive	R133	0.7010847	positive
R10	0.6955673	positive	R72	0.7695389	positive	R134	0.7082187	positive
R11	0.7083546	positive	R73	0.7221823	positive	R135	0.6643533	positive
R12	0.6611001	positive	R74	0.7369168	positive	R136	0.6725239	positive
R13	0.9471539	positive	R75	0.6397089	positive	R137	0.6683157	positive
R14	0.6611001	positive	R76	0.7515062	positive	R138	0.5369617	neutral
R15	0.7091272	positive	R77	0.8243774	positive	R139	0.8571712	positive
R16	0.7821154	positive	R78	0.8829293	positive	R140	0.8305485	positive
R17	0.6955673	positive	R79	0.5075521	neutral	R141	0.6611001	positive
R18	0.0848566	negative	R80	0.669822	positive	R142	0.7539108	positive
R19	0.7965373	positive	R81	0.8545367	positive	R143	0.5962414	neutral
R20	0.6343842	positive	R82	0.5264462	neutral	R144	0.6579996	positive
R21	0.6106698	positive	R83	0.8769734	positive	R145	0.5306377	neutral
R22	0.8305485	positive	R84	0.7324739	positive	R146	0.8896065	positive
R23	0.4791959	neutral	R85	0.1830995	negative	R147	0.6611001	positive
R24	0.6611001	positive	R86	0.6386802	positive	R148	0.6611001	positive
R25	0.7221823	positive	R87	0.7593681	positive	R149	0.7142081	positive

(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R26	0.7992632	positive	R88	0.7982398	positive	R150	0.2140986	negative
R27	0.551259	neutral	R89	0.6022036	positive	R151	0.204607	negative
R28	0.6611001	positive	R90	0.6431589	positive	R152	0.8539953	positive
R29	0.6158647	positive	R91	0.8558288	positive	R153	0.6611001	positive
R30	0.6744086	positive	R92	0.8831398	positive	R154	0.8305485	positive
R31	0.8305485	positive	R93	0.7687876	positive	R155	0.681891	positive
R32	0.6725241	positive	R94	0.6427438	positive	R156	0.7402499	positive
R33	0.6837464	positive	R95	0.8190616	positive	R157	0.6327255	positive
R34	0.6744084	positive	R96	0.7542621	positive	R158	0.1990623	negative
R35	0.0782574	negative	R97	0.6611001	positive	R159	0.2355356	negative
R36	0.7910414	positive	R98	0.6507813	positive	R160	0.8394269	positive
R37	0.7003141	positive	R99	0.840619	positive	R161	0.7136284	positive
R38	0.1155153	negative	R100	0.3991942	negative	R162	0.8449444	positive
R39	0.7539805	positive	R101	0.2264874	negative	R163	0.6436095	positive
R40	0.9147155	positive	R102	0.4524573	neutral	R164	0.6624852	positive
R41	0.0456	negative	R103	0.4965359	neutral	R165	0.6820973	positive
R42	0.9375331	positive	R104	0.599102	neutral	R166	0.7517274	positive
R43	0.5863793	neutral	R105	0.9226713	positive	R167	0.7377169	positive
R44	0.6466318	positive	R106	0.7221823	positive	R168	0.7693523	positive
R45	0.8546049	positive	R107	0.2632535	negative	R169	0.8203211	positive
R46	0.839479	positive	R108	0.1883217	negative	R170	0.2457866	negative
R47	0.8480538	positive	R109	0.8305485	positive	R171	0.6611001	positive
R48	0.6746175	positive	R110	0.0234212	negative	R172	0.7221823	positive
R49	0.7240888	positive	R111	0.3812928	negative	R173	0.6611001	positive
R50	0.6611001	positive	R112	0.669822	positive	R174	0.7221823	positive
R51	0.7165694	positive	R113	0.8060752	positive	R175	0.8386962	positive
R52	0.8273342	positive	R114	0.8587917	positive	R176	0.5616322	neutral
R53	0.9229099	positive	R115	0.8347624	positive	R177	0.7221823	positive
R54	0.7984248	positive	R116	0.7228575	positive	R178	0.8305485	positive
R55	0.7564291	positive	R117	0.7294775	positive	R179	0.7881657	positive
R56	0.7650422	positive	R118	0.926354	positive	R180	0.1987702	negative
R57	0.8123388	positive	R119	0.7472749	positive	R181	0.6994853	positive
R58	0.7676853	positive	R120	0.5815626	neutral	R182	0.6611001	positive
R59	0.8220213	positive	R121	0.7873333	positive	R183	0.7472249	positive
R60	0.6611001	positive	R122	0.6944212	positive	R184	0.6533775	positive
R61	0.543501	neutral	R123	0.6875215	positive	R185	0.6611001	positive
R62	0.8704468	positive	R124	0.698383	positive			

6. Jomblo Park Reviews

Table A1.6 Distribution of Sentiment Analysis Online Reviews of Jomblo Park

Reviews	Sentiment Score	Sentiment Predicate	Reviews	Sentiment Score	Sentiment Predicate	Reviews	Sentiment Score	Sentiment Predicate
(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R1	0.4985797	neutral	R212	0.6257277	positive	R422	0.6611001	positive
R2	0.1102108	negative	R213	0.9960246	positive	R423	0.6611001	positive
R3	0.7619475	positive	R214	0.7900416	positive	R424	0.7320198	positive
R4	0.8539953	positive	R215	0.5601929	neutral	R425	0.8192422	positive
R5	0.8672203	positive	R216	0.8917657	positive	R426	0.7985724	positive
R6	0.6764451	positive	R217	0.6791331	positive	R427	0.6922556	positive
R7	0.5278551	neutral	R218	0.7225157	positive	R428	0.8078197	positive
R8	0.5264889	neutral	R219	0.5921915	neutral	R429	0.5278945	neutral
R9	0.9488803	positive	R220	0.7634338	positive	R430	0.6611001	positive
R10	0.9246099	positive	R221	0.7050989	positive	R431	0.7436557	positive
R11	0.9091685	positive	R222	0.6181708	positive	R432	0.7073322	positive
R12	0.940154	positive	R223	0.6818913	positive	R433	0.2415122	negative
R13	0.6611001	positive	R224	0.069669	negative	R434	0.8640621	positive
R14	0.8305485	positive	R225	0.6227123	positive	R435	0.7602156	positive
R15	0.7472749	positive	R226	0.256387	negative	R436	0.8305485	positive
R16	0.8305485	positive	R227	0.8538333	positive	R437	0.6649299	positive
R17	0.6955673	positive	R228	0.7077959	positive	R438	0.6362443	positive
R18	0.6955673	positive	R229	0.1794921	negative	R439	0.4480214	negative
R19	0.6955673	positive	R230	0.8986149	positive	R440	0.6611001	positive
R20	0.681891	positive	R231	0.6844013	positive	R441	0.3903747	negative
R21	0.6475322	positive	R232	0.7309082	positive	R442	0.7511599	positive
R22	0.8893837	positive	R233	0.5127791	neutral	R443	0.8305485	positive
R23	0.7566657	positive	R234	0.5946092	neutral	R444	0.6818248	positive
R24	0.9022565	positive	R235	0.6032267	positive	R445	0.68625	positive
R25	0.7472749	positive	R236	0.6697166	positive	R446	0.6611001	positive
R26	0.9225707	positive	R237	0.5951685	neutral	R447	0.6611001	positive
R27	0.7493253	positive	R238	0.4876074	neutral	R448	0.9381304	positive
R28	0.8305485	positive	R239	0.7186703	positive	R449	0.6103304	positive
R29	0.7472749	positive	R240	0.6957691	positive	R450	0.7019813	positive
R30	0.6988187	positive	R241	0.048463	negative	R451	0.6327255	positive
R31	0.5605466	neutral	R242	0.7450431	positive	R452	0.5692322	neutral
R32	0.7216086	positive	R243	0.7472749	positive	R453	0.6611001	positive
R33	0.7848417	positive	R244	0.7492883	positive	R454	0.7089201	positive
R34	0.8587487	positive	R245	0.6793295	positive	R455	0.6353544	positive
R35	0.8002348	positive	R246	0.7891077	positive	R456	0.6920265	positive
R36	0.8511675	positive	R247	0.168215	negative	R457	0.8631778	positive

(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R37	0.591262	neutral	R248	0.2713697	negative	R458	0.8043914	positive
R38	0.7238984	positive	R249	0.6611001	positive	R459	0.7591718	positive
R39	0.3122687	negative	R250	0.4425748	negative	R460	0.7534639	positive
R40	0.6611001	positive	R251	0.8988497	positive	R461	0.4752761	neutral
R41	0.8063837	positive	R252	0.9333146	positive	R462	0.6936494	positive
R42	0.5806346	neutral	R253	0.7419382	positive	R463	0.8630931	positive
R43	0.7688772	positive	R254	0.5566148	neutral	R464	0.7053328	positive
R44	0.6955673	positive	R255	0.3762307	negative	R465	0.6389277	positive
R45	0.1918024	negative	R256	0.7607673	positive	R466	0.6922556	positive
R46	0.8305485	positive	R257	0.6781994	positive	R467	0.5711454	neutral
R47	0.7417561	positive	R258	0.758824	positive	R468	0.3538556	negative
R48	0.6955673	positive	R259	0.581966	neutral	R469	0.7469679	positive
R49	0.8444106	positive	R260	0.80726	positive	R470	0.6955394	positive
R50	0.8678614	positive	R261	0.2453173	negative	R471	0.6504101	positive
R51	0.6611001	positive	R262	0.7590851	positive	R472	0.5819591	neutral
R52	0.8775558	positive	R263	0.6791331	positive	R473	0.1691855	negative
R53	0.8495325	positive	R264	0.7826424	positive	R474	0.8305485	positive
R54	0.6955673	positive	R265	0.6640413	positive	R475	0.6504603	positive
R55	0.4631498	neutral	R266	0.8086434	positive	R476	0.7055551	positive
R56	0.6955673	positive	R267	0.0602744	negative	R477	0.6533784	positive
R57	0.6955673	positive	R268	0.669822	positive	R478	0.6872117	positive
R58	0.7564187	positive	R269	0.664552	positive	R479	0.8724716	positive
R59	0.8363191	positive	R270	0.5295898	neutral	R480	0.794974	positive
R60	0.7865385	positive	R271	0.4231956	negative	R481	0.6533775	positive
R61	0.6145118	positive	R272	0.0652106	negative	R482	0.7488404	positive
R62	0.5023118	neutral	R273	0.6725239	positive	R483	0.7293159	positive
R63	0.8532469	positive	R274	0.7900416	positive	R484	0.6611001	positive
R64	0.291165	negative	R275	0.4817231	neutral	R485	0.7840728	positive
R65	0.8225639	positive	R276	0.2089962	negative	R486	0.6723585	positive
R66	0.7472749	positive	R277	0.6615434	positive	R487	0.6628083	positive
R67	0.7211825	positive	R278	0.7029973	positive	R488	0.7162484	positive
R68	0.7211825	positive	R279	0.6611001	positive	R489	0.6318403	positive
R69	0.4870143	neutral	R280	0.6611001	positive	R490	0.7915344	positive
R70	0.7569351	positive	R281	0.6611001	positive	R491	0.8449799	positive
R71	0.7568622	positive	R282	0.6611001	positive	R492	0.6427438	positive
R72	0.3055454	negative	R283	0.6611001	positive	R493	0.4460604	negative
R73	0.7472749	positive	R284	0.7257977	positive	R494	0.6859561	positive
R74	0.7472749	positive	R285	0.7841749	positive	R495	0.3045462	negative
R75	0.7126269	positive	R286	0.705555	positive	R496	0.6190138	positive
R76	0.7211825	positive	R287	0.1320232	negative	R497	0.7569271	positive
R77	0.7933199	positive	R288	0.8269412	positive	R498	0.7952054	positive

(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R78	0.681891	positive	R289	0.3806341	negative	R499	0.6873462	positive
R79	0.2043323	negative	R290	0.8294128	positive	R500	0.7877375	positive
R80	0.4808412	neutral	R291	0.6611001	positive	R501	0.6866302	positive
R81	0.2043323	negative	R292	0.5931357	neutral	R502	0.7034306	positive
R82	0.8386962	positive	R293	0.4924277	neutral	R503	0.6465527	positive
R83	0.8077565	positive	R294	0.8758966	positive	R504	0.7993866	positive
R84	0.4428301	negative	R295	0.7277983	positive	R505	0.6611001	positive
R85	0.6955673	positive	R296	0.1231974	negative	R506	0.6725242	positive
R86	0.7616394	positive	R297	0.6625389	positive	R507	0.5803612	neutral
R87	0.6955673	positive	R298	0.7786651	positive	R508	0.8175048	positive
R88	0.8305485	positive	R299	0.8173102	positive	R509	0.616257	positive
R89	0.8211692	positive	R300	0.4762886	neutral	R510	0.6467982	positive
R90	0.2043323	negative	R301	0.7377909	positive	R511	0.5813721	neutral
R91	0.8539953	positive	R302	0.6095372	positive	R512	0.9021218	positive
R92	0.8234062	positive	R303	0.6611001	positive	R513	0.6552902	positive
R93	0.8305485	positive	R304	0.6725239	positive	R514	0.6935613	positive
R94	0.7355196	positive	R305	0.7156134	positive	R515	0.7290077	positive
R95	0.7551054	positive	R306	0.7652009	positive	R516	0.6840048	positive
R96	0.6611001	positive	R307	0.6048813	positive	R517	0.6922556	positive
R97	0.7968454	positive	R308	0.0860978	negative	R518	0.7765945	positive
R98	0.7102072	positive	R309	0.7622924	positive	R519	0.940316	positive
R99	0.658214	positive	R310	0.3690411	negative	R520	0.9675488	positive
R100	0.759955	positive	R311	0.6551278	positive	R521	0.7375742	positive
R101	0.5488122	neutral	R312	0.7928276	positive	R522	0.7602156	positive
R102	0.8305485	positive	R313	0.6277326	positive	R523	0.7744919	positive
R103	0.6955673	positive	R314	0.0790493	negative	R524	0.3210859	negative
R104	0.7472749	positive	R315	0.6764957	positive	R525	0.6990596	positive
R105	0.6997105	positive	R316	0.6611001	positive	R526	0.7390462	positive
R106	0.7602156	positive	R317	0.0535474	negative	R527	0.72781	positive
R107	0.6955673	positive	R318	0.6152138	positive	R528	0.7260341	positive
R108	0.8376631	positive	R319	0.7509322	positive	R529	0.7019814	positive
R109	0.6883622	positive	R320	0.7198057	positive	R530	0.9085779	positive
R110	0.2043323	negative	R321	0.5384024	neutral	R531	0.7264605	positive
R111	0.8022154	positive	R322	0.5452307	neutral	R532	0.7221823	positive
R112	0.5951684	neutral	R323	0.5602335	neutral	R533	0.5973555	neutral
R113	0.7891077	positive	R324	0.8788601	positive	R534	0.6747566	positive
R114	0.6611001	positive	R325	0.6611001	positive	R535	0.8135328	positive
R115	0.7472749	positive	R326	0.8345986	positive	R536	0.643922	positive
R116	0.6611001	positive	R327	0.6611001	positive	R537	0.7602156	positive
R117	0.8305485	positive	R328	0.5962839	neutral	R538	0.8305485	positive
R118	0.6062871	positive	R329	0.7568862	positive	R539	0.7484781	positive

(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R119	0.8305485	positive	R330	0.6275735	positive	R540	0.4656533	neutral
R120	0.7492983	positive	R331	0.9380467	positive	R541	0.7837704	positive
R121	0.3132512	negative	R332	0.1428737	negative	R542	0.7546386	positive
R122	0.0297618	negative	R333	0.4547756	neutral	R543	0.7604576	positive
R123	0.6064135	positive	R334	0.6958123	positive	R544	0.7144135	positive
R124	0.9700794	positive	R335	0.8151754	positive	R545	0.6611001	positive
R125	0.4297847	negative	R336	0.7281483	positive	R546	0.8637524	positive
R126	0.8413239	positive	R337	0.567276	neutral	R547	0.6217058	positive
R127	0.4654797	neutral	R338	0.5922408	neutral	R548	0.8305485	positive
R128	0.0699023	negative	R339	0.2701004	negative	R549	0.9173247	positive
R129	0.9611674	positive	R340	0.6811023	positive	R550	0.7928861	positive
R130	0.9283827	positive	R341	0.6725239	positive	R551	0.6611001	positive
R131	0.8466501	positive	R342	0.8789361	positive	R552	0.7216086	positive
R132	0.8795382	positive	R343	0.748799	positive	R553	0.8942754	positive
R133	0.8546908	positive	R344	0.7225676	positive	R554	0.6589644	positive
R134	0.5635588	neutral	R345	0.5957098	neutral	R555	0.6611001	positive
R135	0.7169801	positive	R346	0.6533775	positive	R556	0.6611001	positive
R136	0.4994105	neutral	R347	0.6490962	positive	R557	0.7037717	positive
R137	0.0349388	negative	R348	0.5744481	neutral	R558	0.6264616	positive
R138	0.8433509	positive	R349	0.8651868	positive	R559	0.7890099	positive
R139	0.0393193	negative	R350	0.9274742	positive	R560	0.8037698	positive
R140	0.8301708	positive	R351	0.9122064	positive	R561	0.669822	positive
R141	0.1959957	negative	R352	0.2924652	negative	R562	0.6406558	positive
R142	0.6278089	positive	R353	0.3982682	negative	R563	0.7900416	positive
R143	0.9792097	positive	R354	0.7966521	positive	R564	0.7274995	positive
R144	0.599808	neutral	R355	0.7404019	positive	R565	0.2639731	negative
R145	0.8366616	positive	R356	0.8305485	positive	R566	0.5082286	neutral
R146	0.9504784	positive	R357	0.7446758	positive	R567	0.5142061	neutral
R147	0.9666706	positive	R358	0.8252163	positive	R568	0.6659215	positive
R148	0.6046383	positive	R359	0.8579135	positive	R569	0.6837464	positive
R149	0.4931585	neutral	R360	0.5627545	neutral	R570	0.6687391	positive
R150	0.7318217	positive	R361	0.6611001	positive	R571	0.7216086	positive
R151	0.0842943	negative	R362	0.8305485	positive	R572	0.7602156	positive
R152	0.6722234	positive	R363	0.8127134	positive	R573	0.6677878	positive
R153	0.7906126	positive	R364	0.2494509	negative	R574	0.669581	positive
R154	0.6847103	positive	R365	0.6914181	positive	R575	0.7423888	positive
R155	0.7265288	positive	R366	0.6381977	positive	R576	0.7472749	positive
R156	0.2043885	negative	R367	0.2294904	negative	R577	0.7602156	positive
R157	0.6806175	positive	R368	0.7539105	positive	R578	0.6199403	positive
R158	0.2474814	negative	R369	0.2977936	negative	R579	0.8305485	positive
R159	0.8305485	positive	R370	0.073877	negative	R580	0.6533775	positive

(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R160	0.6611001	positive	R371	0.647336	positive	R581	0.8190035	positive
R161	0.8305689	positive	R372	0.8221464	positive	R582	0.6837464	positive
R162	0.7221131	positive	R373	0.6673493	positive	R583	0.7113183	positive
R163	0.2099942	negative	R374	0.6427438	positive	R584	0.6816843	positive
R164	0.1513576	negative	R375	0.6611001	positive	R585	0.681891	positive
R165	0.6611001	positive	R376	0.8899988	positive	R586	0.6922556	positive
R166	0.4228837	negative	R377	0.7648068	positive	R587	0.7602156	positive
R167	0.8793019	positive	R378	0.5896915	neutral	R588	0.7770361	positive
R168	0.6746176	positive	R379	0.7802581	positive	R589	0.6611001	positive
R169	0.7770387	positive	R380	0.6611001	positive	R590	0.5352203	neutral
R170	0.6503331	positive	R381	0.6611001	positive	R591	0.687442	positive
R171	0.7472749	positive	R382	0.8113751	positive	R592	0.5357236	neutral
R172	0.4308219	negative	R383	0.7472749	positive	R593	0.6837468	positive
R173	0.1481	negative	R384	0.311366	negative	R594	0.7602156	positive
R174	0.6436501	positive	R385	0.7019814	positive	R595	0.5719575	neutral
R175	0.0373486	negative	R386	0.6611001	positive	R596	0.488679	neutral
R176	0.6791331	positive	R387	0.0342227	negative	R597	0.6611001	positive
R177	0.6611001	positive	R388	0.9492527	positive	R598	0.8305485	positive
R178	0.6947602	positive	R389	0.8459845	positive	R599	0.254661	negative
R179	0.492427	neutral	R390	0.8989972	positive	R600	0.8695166	positive
R180	0.6746176	positive	R391	0.9125774	positive	R601	0.815452	positive
R181	0.7126269	positive	R392	0.7784126	positive	R602	0.8196872	positive
R182	0.6746176	positive	R393	0.8575274	positive	R603	0.7472749	positive
R183	0.807266	positive	R394	0.5002341	neutral	R604	0.5962411	neutral
R184	0.653517	positive	R395	0.9164488	positive	R605	0.8305485	positive
R185	0.6608599	positive	R396	0.7536778	positive	R606	0.6611001	positive
R186	0.0113637	negative	R397	0.3063269	negative	R607	0.1418829	negative
R187	0.7872345	positive	R398	0.8003948	positive	R608	0.7472749	positive
R188	0.7847978	positive	R399	0.6611001	positive	R609	0.6611001	positive
R189	0.7144567	positive	R400	0.6736022	positive	R610	0.7125681	positive
R190	0.5284935	neutral	R401	0.7644209	positive	R611	0.8305485	positive
R191	0.7109268	positive	R402	0.6544862	positive	R612	0.6762881	positive
R192	0.8646806	positive	R403	0.7830226	positive	R613	0.6611001	positive
R193	0.4513777	neutral	R404	0.6389277	positive	R614	0.7019814	positive
R194	0.1821979	negative	R405	0.1654398	negative	R615	0.6611001	positive
R195	0.165567	negative	R406	0.84376	positive	R616	0.7019814	positive
R196	0.4448009	negative	R407	0.9699491	positive	R617	0.7308248	positive
R197	0.823811	positive	R408	0.6253993	positive	R618	0.6837464	positive
R198	0.6416425	positive	R409	0.8305485	positive	R619	0.6993209	positive
R199	0.6649301	positive	R410	0.7464273	positive	R620	0.654347	positive
R200	0.6566132	positive	R411	0.6611001	positive	R621	0.6611001	positive

(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R201	0.7470704	positive	R412	0.7464761	positive	R622	0.5213394	neutral
R202	0.8739114	positive	R413	0.7264605	positive	R623	0.7108684	positive
R203	0.6163152	positive	R414	0.3413389	negative	R624	0.2495946	negative
R204	0.529086	neutral	R415	0.6881563	positive	R625	0.6971781	positive
R205	0.8129221	positive	R416	0.5541633	neutral	R626	0.6045396	positive
R206	0.6499184	positive	R417	0.1175393	negative	R627	0.681891	positive
R207	0.7720411	positive	R418	0.0620344	negative	R628	0.6611001	positive
R208	0.7680653	positive	R419	0.7091575	positive	R629	0.7472749	positive
R209	0.663443	positive	R420	0.6885661	positive	R630	0.6611001	positive
R210	0.7450539	positive	R421	0.7957544	positive	R631	0.7599761	positive
R211	0.4850376	neutral						

7. Film Park Reviews

Table A1.7 Distribution of Sentiment Analysis Online Reviews of Film Park

Reviews	Sentiment Score	Sentiment Predicate	Reviews	Sentiment Score	Sentiment Predicate	Reviews	Sentiment Score	Sentiment Predicate
(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R1	0.0045852	negative	R238	0.6136502	positive	R475	0.4931106	neutral
R2	0.5146824	neutral	R239	0.6678931	positive	R476	0.2188317	negative
R3	0.8831002	positive	R240	0.6455732	positive	R477	0.6611001	positive
R4	0.8731503	positive	R241	0.1083805	negative	R478	0.821506	positive
R5	0.6558598	positive	R242	0.7474271	positive	R479	0.7714835	positive
R6	0.0979565	negative	R243	0.6341632	positive	R480	0.5839933	neutral
R7	0.6016105	positive	R244	0.5622469	neutral	R481	0.7266006	positive
R8	0.6327528	positive	R245	0.9717144	positive	R482	0.6013488	positive
R9	0.9404547	positive	R246	0.7816545	positive	R483	0.6611001	positive
R10	0.9844649	positive	R247	0.7430018	positive	R484	0.3422287	negative
R11	0.5835209	neutral	R248	0.8744528	positive	R485	0.8236905	positive
R12	0.8496687	positive	R249	0.7945276	positive	R486	0.8737124	positive
R13	0.681891	positive	R250	0.4279402	negative	R487	0.5496917	neutral
R14	0.9771595	positive	R251	0.225783	negative	R488	0.787468	positive
R15	0.89515	positive	R252	0.171681	negative	R489	0.7602156	positive
R16	0.6611001	positive	R253	0.7802188	positive	R490	0.7368523	positive
R17	0.8434064	positive	R254	0.6891781	positive	R491	0.9829643	positive
R18	0.6955673	positive	R255	0.8111744	positive	R492	0.6956689	positive
R19	0.7472749	positive	R256	0.5871712	neutral	R493	0.2169047	negative
R20	0.6955673	positive	R257	0.2049256	negative	R494	0.7056957	positive
R21	0.6955673	positive	R258	0.2331565	negative	R495	0.6611001	positive
R22	0.6611001	positive	R259	0.8593236	positive	R496	0.955082	positive
R23	0.2489622	negative	R260	0.79226	positive	R497	0.8952613	positive

(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R24	0.6955673	positive	R261	0.6155632	positive	R498	0.7421333	positive
R25	0.757818	positive	R262	0.7968606	positive	R499	0.6734674	positive
R26	0.9242652	positive	R263	0.3542909	negative	R500	0.6611001	positive
R27	0.7472749	positive	R264	0.9861889	positive	R501	0.7811895	positive
R28	0.8305485	positive	R265	0.7556394	positive	R502	0.845541	positive
R29	0.1767603	negative	R266	0.3776456	negative	R503	0.9060694	positive
R30	0.7472749	positive	R267	0.8064112	positive	R504	0.8242995	positive
R31	0.883627	positive	R268	0.8408662	positive	R505	0.6611001	positive
R32	0.6611001	positive	R269	0.9409153	positive	R506	0.8896242	positive
R33	0.7621668	positive	R270	0.8464085	positive	R507	0.9003436	positive
R34	0.7602156	positive	R271	0.8526692	positive	R508	0.654347	positive
R35	0.7992632	positive	R272	0.3813238	negative	R509	0.8937496	positive
R36	0.8305485	positive	R273	0.8674508	positive	R510	0.7489371	positive
R37	0.6287621	positive	R274	0.8228099	positive	R511	0.9271048	positive
R38	0.2676554	negative	R275	0.6851179	positive	R512	0.8291206	positive
R39	0.3708487	negative	R276	0.8220726	positive	R513	0.7737432	positive
R40	0.8266436	positive	R277	0.8248702	positive	R514	0.7317339	positive
R41	0.6137224	positive	R278	0.7332193	positive	R515	0.92834	positive
R42	0.7315395	positive	R279	0.7504494	positive	R516	0.7472749	positive
R43	0.6611001	positive	R280	0.6467982	positive	R517	0.8663011	positive
R44	0.0342868	negative	R281	0.2797511	negative	R518	0.6504647	positive
R45	0.6892803	positive	R282	0.5384161	neutral	R519	0.8022894	positive
R46	0.8357478	positive	R283	0.7442428	positive	R520	0.6602734	positive
R47	0.7988976	positive	R284	0.1825732	negative	R521	0.3281849	negative
R48	0.8987283	positive	R285	0.9215501	positive	R522	0.8181919	positive
R49	0.7205608	positive	R286	0.8575973	positive	R523	0.9270928	positive
R50	0.5872251	neutral	R287	0.7822937	positive	R524	0.8100968	positive
R51	0.9801088	positive	R288	0.7152877	positive	R525	0.9352237	positive
R52	0.87874	positive	R289	0.4213092	negative	R526	0.697228	positive
R53	0.6988847	positive	R290	0.8261549	positive	R527	0.6725244	positive
R54	0.846948	positive	R291	0.8305485	positive	R528	0.6972936	positive
R55	0.8434064	positive	R292	0.8560936	positive	R529	0.8958248	positive
R56	0.873656	positive	R293	0.8409709	positive	R530	0.6151447	positive
R57	0.7836285	positive	R294	0.6494855	positive	R531	0.8469748	positive
R58	0.6611001	positive	R295	0.8305485	positive	R532	0.8496687	positive
R59	0.8972141	positive	R296	0.896096	positive	R533	0.7840728	positive
R60	0.8707612	positive	R297	0.8690924	positive	R534	0.3441112	negative
R61	0.7891077	positive	R298	0.7336019	positive	R535	0.6612372	positive
R62	0.7472749	positive	R299	0.3215417	negative	R536	0.4365281	negative
R63	0.5143841	neutral	R300	0.5416301	neutral	R537	0.7214447	positive
R64	0.3868494	negative	R301	0.1961863	negative	R538	0.7591718	positive

(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R65	0.8305485	positive	R302	0.6611001	positive	R539	0.9180543	positive
R66	0.6285433	positive	R303	0.9723955	positive	R540	0.8305485	positive
R67	0.7147665	positive	R304	0.7489526	positive	R541	0.6471633	positive
R68	0.7238276	positive	R305	0.9075556	positive	R542	0.8305485	positive
R69	0.8149013	positive	R306	0.8714814	positive	R543	0.8592371	positive
R70	0.8160791	positive	R307	0.7451308	positive	R544	0.892844	positive
R71	0.6955673	positive	R308	0.5127791	neutral	R545	0.7983283	positive
R72	0.7891077	positive	R309	0.8528112	positive	R546	0.7019814	positive
R73	0.6955673	positive	R310	0.7643577	positive	R547	0.021194	negative
R74	0.7351707	positive	R311	0.7442935	positive	R548	0.6293065	positive
R75	0.6611001	positive	R312	0.6611001	positive	R549	0.6467982	positive
R76	0.8305485	positive	R313	0.6611001	positive	R550	0.6542627	positive
R77	0.7934838	positive	R314	0.6279841	positive	R551	0.9094606	positive
R78	0.8496686	positive	R315	0.6555166	positive	R552	0.5423312	neutral
R79	0.7492309	positive	R316	0.666837	positive	R553	0.7511973	positive
R80	0.6478578	positive	R317	0.8305485	positive	R554	0.4798285	neutral
R81	0.8371442	positive	R318	0.9593443	positive	R555	0.7989514	positive
R82	0.645573	positive	R319	0.8217859	positive	R556	0.7221823	positive
R83	0.667788	positive	R320	0.6805786	positive	R557	0.4107593	negative
R84	0.8305485	positive	R321	0.7019814	positive	R558	0.6611001	positive
R85	0.8434064	positive	R322	0.9726231	positive	R559	0.7714603	positive
R86	0.6968899	positive	R323	0.831086	positive	R560	0.8350075	positive
R87	0.8305485	positive	R324	0.6448379	positive	R561	0.0582541	negative
R88	0.7472749	positive	R325	0.4096007	negative	R562	0.3127245	negative
R89	0.7472749	positive	R326	0.8749108	positive	R563	0.8305485	positive
R90	0.7761717	positive	R327	0.7609335	positive	R564	0.7856229	positive
R91	0.7693409	positive	R328	0.7739865	positive	R565	0.6341766	positive
R92	0.7597593	positive	R329	0.8267623	positive	R566	0.6611001	positive
R93	0.7472749	positive	R330	0.6467982	positive	R567	0.7899981	positive
R94	0.8305485	positive	R331	0.9179304	positive	R568	0.7738582	positive
R95	0.6611001	positive	R332	0.7143621	positive	R569	0.5777324	neutral
R96	0.7472749	positive	R333	0.6611001	positive	R570	0.3767663	negative
R97	0.6955673	positive	R334	0.7472749	positive	R571	0.6807535	positive
R98	0.6837464	positive	R335	0.6919252	positive	R572	0.737482	positive
R99	0.8456571	positive	R336	0.2432424	negative	R573	0.7257977	positive
R100	0.8305485	positive	R337	0.7019814	positive	R574	0.759836	positive
R101	0.8305485	positive	R338	0.8305485	positive	R575	0.6217058	positive
R102	0.7472749	positive	R339	0.6725239	positive	R576	0.9655656	positive
R103	0.7581258	positive	R340	0.6816843	positive	R577	0.7472749	positive
R104	0.8305485	positive	R341	0.7602156	positive	R578	0.5916197	neutral
R105	0.6611001	positive	R342	0.7472749	positive	R579	0.8932337	positive

(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R106	0.8305485	positive	R343	0.8305485	positive	R580	0.8150069	positive
R107	0.8305485	positive	R344	0.7840728	positive	R581	0.8305485	positive
R108	0.6494852	positive	R345	0.8082838	positive	R582	0.7772479	positive
R109	0.7001854	positive	R346	0.6302329	positive	R583	0.628103	positive
R110	0.6837464	positive	R347	0.4091147	negative	R584	0.6185697	positive
R111	0.6611001	positive	R348	0.7311984	positive	R585	0.6816843	positive
R112	0.6611001	positive	R349	0.0468457	negative	R586	0.7091575	positive
R113	0.9138334	positive	R350	0.7204003	positive	R587	0.6762881	positive
R114	0.6289649	positive	R351	0.6533775	positive	R588	0.6837464	positive
R115	0.6590734	positive	R352	0.9400771	positive	R589	0.7677317	positive
R116	0.4302515	negative	R353	0.0054095	negative	R590	0.7256871	positive
R117	0.6776496	positive	R354	0.4929518	neutral	R591	0.8739812	positive
R118	0.9054316	positive	R355	0.7212285	positive	R592	0.7472749	positive
R119	0.5590581	neutral	R356	0.7273115	positive	R593	0.690511	positive
R120	0.346801	negative	R357	0.6818449	positive	R594	0.7019814	positive
R121	0.9281396	positive	R358	0.349569	negative	R595	0.6663837	positive
R122	0.5590581	neutral	R359	0.6611001	positive	R596	0.8305485	positive
R123	0.6702726	positive	R360	0.6983828	positive	R597	0.4271552	negative
R124	0.8224422	positive	R361	0.9618253	positive	R598	0.8328484	positive
R125	0.7124557	positive	R362	0.6611001	positive	R599	0.7789508	positive
R126	0.8502009	positive	R363	0.4409548	negative	R600	0.5175953	neutral
R127	0.3648041	negative	R364	0.687442	positive	R601	0.8069314	positive
R128	0.8713523	positive	R365	0.8362024	positive	R602	0.8974729	positive
R129	0.3195105	negative	R366	0.7416089	positive	R603	0.7672846	positive
R130	0.6919812	positive	R367	0.8305485	positive	R604	0.8159628	positive
R131	0.7047872	positive	R368	0.9898749	positive	R605	0.616653	positive
R132	0.0944919	negative	R369	0.7087101	positive	R606	0.8006068	positive
R133	0.8200489	positive	R370	0.683452	positive	R607	0.8305485	positive
R134	0.7150889	positive	R371	0.2723825	negative	R608	0.8441366	positive
R135	0.9322636	positive	R372	0.804199	positive	R609	0.6725239	positive
R136	0.6618583	positive	R373	0.2394465	negative	R610	0.7840728	positive
R137	0.8469408	positive	R374	0.8061163	positive	R611	0.8236079	positive
R138	0.0515334	negative	R375	0.931138	positive	R612	0.7605143	positive
R139	0.7578042	positive	R376	0.8367636	positive	R613	0.6684354	positive
R140	0.7751687	positive	R377	0.0277414	negative	R614	0.774762	positive
R141	0.8257867	positive	R378	0.9796773	positive	R615	0.6611001	positive
R142	0.6727194	positive	R379	0.7305212	positive	R616	0.7593681	positive
R143	0.2005161	negative	R380	0.9246997	positive	R617	0.8305485	positive
R144	0.5619748	neutral	R381	0.6611001	positive	R618	0.1613332	negative
R145	0.1542562	negative	R382	0.6237985	positive	R619	0.7313523	positive
R146	0.8648885	positive	R383	0.6372827	positive	R620	0.4688751	neutral

(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R147	0.07284	negative	R384	0.3275432	negative	R621	0.4138116	negative
R148	0.8929178	positive	R385	0.8305485	positive	R622	0.6611001	positive
R149	0.8691905	positive	R386	0.8246898	positive	R623	0.1017068	negative
R150	0.6078095	positive	R387	0.6913424	positive	R624	0.2454073	negative
R151	0.2917923	negative	R388	0.598148	neutral	R625	0.6611001	positive
R152	0.731886	positive	R389	0.8781359	positive	R626	0.73576	positive
R153	0.4097629	negative	R390	0.7836201	positive	R627	0.7602156	positive
R154	0.9552931	positive	R391	0.7602156	positive	R628	0.6611001	positive
R155	0.6131979	positive	R392	0.7099236	positive	R629	0.6611001	positive
R156	0.8504347	positive	R393	0.9289702	positive	R630	0.6993852	positive
R157	0.9014277	positive	R394	0.1761537	negative	R631	0.8305485	positive
R158	0.3202987	negative	R395	0.7121513	positive	R632	0.809047	positive
R159	0.8662333	positive	R396	0.7216086	positive	R633	0.6881573	positive
R160	0.8438376	positive	R397	0.6006115	positive	R634	0.6762881	positive
R161	0.7972756	positive	R398	0.0205748	negative	R635	0.7840728	positive
R162	0.7732422	positive	R399	0.6159854	positive	R636	0.5000801	neutral
R163	0.6470124	positive	R400	0.8057953	positive	R637	0.6611001	positive
R164	0.8335668	positive	R401	0.7221823	positive	R638	0.6883737	positive
R165	0.7418899	positive	R402	0.6237985	positive	R639	0.6611001	positive
R166	0.0869827	negative	R403	0.780962	positive	R640	0.912092	positive
R167	0.6157507	positive	R404	0.7581258	positive	R641	0.7456358	positive
R168	0.6955673	positive	R405	0.6611001	positive	R642	0.5991927	neutral
R169	0.8644128	positive	R406	0.7312585	positive	R643	0.86759	positive
R170	0.1804059	negative	R407	0.1851736	negative	R644	0.6971781	positive
R171	0.6209166	positive	R408	0.3019579	negative	R645	0.8639464	positive
R172	0.9621157	positive	R409	0.8305485	positive	R646	0.7472749	positive
R173	0.8736829	positive	R410	0.6994451	positive	R647	0.8188191	positive
R174	0.148929	negative	R411	0.3893457	negative	R648	0.8305485	positive
R175	0.0830048	negative	R412	0.7305329	positive	R649	0.753911	positive
R176	0.0888575	negative	R413	0.466551	neutral	R650	0.8721953	positive
R177	0.6749269	positive	R414	0.8829422	positive	R651	0.7333125	positive
R178	0.744449	positive	R415	0.7916322	positive	R652	0.6611001	positive
R179	0.7551461	positive	R416	0.8790084	positive	R653	0.6505997	positive
R180	0.1916248	negative	R417	0.9233001	positive	R654	0.8877045	positive
R181	0.3838559	negative	R418	0.7238983	positive	R655	0.7019814	positive
R182	0.7260341	positive	R419	0.3122334	negative	R656	0.5919524	neutral
R183	0.3138027	negative	R420	0.7351943	positive	R657	0.3520345	negative
R184	0.8189902	positive	R421	0.6611001	positive	R658	0.8305485	positive
R185	0.7058154	positive	R422	0.4623246	neutral	R659	0.6419222	positive
R186	0.4220599	negative	R423	0.8188555	positive	R660	0.7342653	positive
R187	0.8285615	positive	R424	0.809047	positive	R661	0.7472749	positive

(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R188	0.1630253	negative	R425	0.9328352	positive	R662	0.2317533	negative
R189	0.7936174	positive	R426	0.7840728	positive	R663	0.6533775	positive
R190	0.0296993	negative	R427	0.6611001	positive	R664	0.7231438	positive
R191	0.9190611	positive	R428	0.8305485	positive	R665	0.8305485	positive
R192	0.4804023	neutral	R429	0.021914	negative	R666	0.3257748	negative
R193	0.7883216	positive	R430	0.6531348	positive	R667	0.6952651	positive
R194	0.7079229	positive	R431	0.700859	positive	R668	0.5356351	neutral
R195	0.8985318	positive	R432	0.7810388	positive	R669	0.5804117	neutral
R196	0.6715088	positive	R433	0.8685342	positive	R670	0.764661	positive
R197	0.8115404	positive	R434	0.4660203	neutral	R671	0.8163831	positive
R198	0.9358471	positive	R435	0.7004427	positive	R672	0.7260341	positive
R199	0.9408112	positive	R436	0.6611001	positive	R673	0.6611001	positive
R200	0.0368652	negative	R437	0.416418	negative	R674	0.4426381	negative
R201	0.8878117	positive	R438	0.7482616	positive	R675	0.7346275	positive
R202	0.941204	positive	R439	0.7680013	positive	R676	0.6611001	positive
R203	0.7693409	positive	R440	0.7250043	positive	R677	0.7019814	positive
R204	0.7892392	positive	R441	0.3502711	negative	R678	0.6920273	positive
R205	0.7323808	positive	R442	0.6501358	positive	R679	0.6281785	positive
R206	0.8640524	positive	R443	0.4225281	negative	R680	0.8305485	positive
R207	0.6856667	positive	R444	0.8056064	positive	R681	0.654347	positive
R208	0.9369205	positive	R445	0.9266071	positive	R682	0.8790084	positive
R209	0.6660182	positive	R446	0.1211515	negative	R683	0.8554584	positive
R210	0.7685933	positive	R447	0.4674845	neutral	R684	0.6837464	positive
R211	0.9379181	positive	R448	0.3102071	negative	R685	0.6725239	positive
R212	0.7161937	positive	R449	0.7812014	positive	R686	0.7230411	positive
R213	0.7472749	positive	R450	0.6706336	positive	R687	0.6611001	positive
R214	0.9814849	positive	R451	0.8369566	positive	R688	0.7602156	positive
R215	0.9017304	positive	R452	0.7819461	positive	R689	0.7315395	positive
R216	0.5659882	neutral	R453	0.7759855	positive	R690	0.7631609	positive
R217	0.7305073	positive	R454	0.7300717	positive	R691	0.6725239	positive
R218	0.6419145	positive	R455	0.76051	positive	R692	0.6611001	positive
R219	0.9182328	positive	R456	0.8321912	positive	R693	0.7019814	positive
R220	0.7562124	positive	R457	0.7891082	positive	R694	0.6611001	positive
R221	0.1412974	negative	R458	0.7019808	positive	R695	0.6611001	positive
R222	0.5696871	neutral	R459	0.6821237	positive	R696	0.8305485	positive
R223	0.7529222	positive	R460	0.6887282	positive	R697	0.754528	positive
R224	0.4701363	neutral	R461	0.8481871	positive	R698	0.7472749	positive
R225	0.7179222	positive	R462	0.7722394	positive	R699	0.6611001	positive
R226	0.4191089	negative	R463	0.5348984	neutral	R700	0.687442	positive
R227	0.7786573	positive	R464	0.3230313	negative	R701	0.6611001	positive
R228	0.7216086	positive	R465	0.7438604	positive	R702	0.7602156	positive

(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R229	0.926105	positive	R466	0.7394163	positive	R703	0.6611001	positive
R230	0.9614764	positive	R467	0.9378088	positive	R704	0.6611001	positive
R231	0.7897716	positive	R468	0.745491	positive	R705	0.7891077	positive
R232	0.3261881	negative	R469	0.4745989	neutral	R706	0.8305485	positive
R233	0.7728896	positive	R470	0.7431568	positive	R707	0.6611	positive
R234	0.8329485	positive	R471	0.7244928	positive	R708	0.6611001	positive
R235	0.9091938	positive	R472	0.7927552	positive	R709	0.764661	positive
R236	0.7019814	positive	R473	0.3097856	negative	R710	0.8305485	positive
R237	0.797942	positive	R474	0.7727768	positive			

8. Lansia Park Reviews

Table A1.8 Distribution of Sentiment Analysis Online Reviews of Lansia Park

Reviews	Sentiment Score	Sentiment Predicate	Reviews	Sentiment Score	Sentiment Predicate	Reviews	Sentiment Score	Sentiment Predicate
(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R1	0.5341405	neutral	R472	0.7353103	positive	R942	0.8884674	positive
R2	0.8663171	positive	R473	0.5478793	neutral	R943	0.7599403	positive
R3	0.7854285	positive	R474	0.8714044	positive	R944	0.7472749	positive
R4	0.8726172	positive	R475	0.8136172	positive	R945	0.9247569	positive
R5	0.9110754	positive	R476	0.684482	positive	R946	0.8733572	positive
R6	0.7939203	positive	R477	0.8612486	positive	R947	0.760198	positive
R7	0.8690766	positive	R478	0.6966112	positive	R948	0.4955216	neutral
R8	0.9143365	positive	R479	0.6611001	positive	R949	0.863564	positive
R9	0.3419591	negative	R480	0.8163872	positive	R950	0.6467982	positive
R10	0.7760512	positive	R481	0.7800555	positive	R951	0.6913424	positive
R11	0.9546826	positive	R482	0.84914	positive	R952	0.8305485	positive
R12	0.785959	positive	R483	0.2372631	negative	R953	0.6611001	positive
R13	0.5006617	neutral	R484	0.9423159	positive	R954	0.7739426	positive
R14	0.4885305	neutral	R485	0.6755846	positive	R955	0.7174632	positive
R15	0.8295921	positive	R486	0.7902735	positive	R956	0.6846735	positive
R16	0.8712209	positive	R487	0.7419608	positive	R957	0.7724273	positive
R17	0.4141236	negative	R488	0.7605939	positive	R958	0.8680371	positive
R18	0.7558811	positive	R489	0.7959573	positive	R959	0.8305485	positive
R19	0.8033923	positive	R490	0.7605939	positive	R960	0.7472749	positive
R20	0.7987657	positive	R491	0.8649046	positive	R961	0.6611001	positive
R21	0.9076514	positive	R492	0.1758292	negative	R962	0.6725239	positive
R22	0.5221502	neutral	R493	0.2304291	negative	R963	0.6209784	positive
R23	0.7732257	positive	R494	0.7877913	positive	R964	0.9039877	positive
R24	0.8177959	positive	R495	0.7822361	positive	R965	0.7288066	positive
R25	0.7875985	positive	R496	0.6889088	positive	R966	0.6316611	positive

(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R26	0.6070009	positive	R497	0.4357925	negative	R967	0.5817735	neutral
R27	0.7019816	positive	R498	0.693294	positive	R968	0.6571891	positive
R28	0.749202	positive	R499	0.7131267	positive	R969	0.8807051	positive
R29	0.9218714	positive	R500	0.7108424	positive	R970	0.7602156	positive
R30	0.723792	positive	R501	0.6892806	positive	R971	0.7975101	positive
R31	0.9130626	positive	R502	0.6404071	positive	R972	0.5654184	neutral
R32	0.8577121	positive	R503	0.2469859	negative	R973	0.9142526	positive
R33	0.9415253	positive	R504	0.55	neutral	R974	0.2459805	negative
R34	0.6611001	positive	R505	0.6427439	positive	R975	0.4803079	neutral
R35	0.0574282	negative	R506	0.6116564	positive	R976	0.8495298	positive
R36	0.7187715	positive	R507	0.8229919	positive	R977	0.7019814	positive
R37	0.3994226	negative	R508	0.8997396	positive	R978	0.4167052	negative
R38	0.7472749	positive	R509	0.8666986	positive	R979	0.6611001	positive
R39	0.6698221	positive	R510	0.8320829	positive	R980	0.7702438	positive
R40	0.8766332	positive	R511	0.5950407	neutral	R981	0.7400782	positive
R41	0.3958596	negative	R512	0.4204679	negative	R982	0.812744	positive
R42	0.6931678	positive	R513	0.689869	positive	R983	0.8305485	positive
R43	0.0289389	negative	R514	0.7676427	positive	R984	0.3322056	negative
R44	0.5939942	neutral	R515	0.8374571	positive	R985	0.9117149	positive
R45	0.7190511	positive	R516	0.8889972	positive	R986	0.2928445	negative
R46	0.7797994	positive	R517	0.8227721	positive	R987	0.8613179	positive
R47	0.8434064	positive	R518	0.9129513	positive	R988	0.7262105	positive
R48	0.6591775	positive	R519	0.7901651	positive	R989	0.5486174	neutral
R49	0.9530427	positive	R520	0.7758202	positive	R990	0.7346472	positive
R50	0.7403796	positive	R521	0.681891	positive	R991	0.6578395	positive
R51	0.6955673	positive	R522	0.8010363	positive	R992	0.7398716	positive
R52	0.9508485	positive	R523	0.6067185	positive	R993	0.4993895	neutral
R53	0.8735758	positive	R524	0.5000154	neutral	R994	0.8611076	positive
R54	0.6291237	positive	R525	0.5469252	neutral	R995	0.6467982	positive
R55	0.3627387	negative	R526	0.6952651	positive	R996	0.8271399	positive
R56	0.6766301	positive	R527	0.7842537	positive	R997	0.632726	positive
R57	0.7694545	positive	R528	0.2020396	negative	R998	0.7492881	positive
R58	0.8305485	positive	R529	0.9157717	positive	R999	0.7019814	positive
R59	0.7791355	positive	R530	0.876353	positive	R1000	0.7019814	positive
R60	0.9456223	positive	R531	0.7593776	positive	R1001	0.8353187	positive
R61	0.8110539	positive	R532	0.7817446	positive	R1002	0.6611001	positive
R62	0.7687322	positive	R533	0.7048875	positive	R1003	0.8933669	positive
R63	0.9376292	positive	R534	0.6836842	positive	R1004	0.8832195	positive
R64	0.7221823	positive	R535	0.6791331	positive	R1005	0.803356	positive
R65	0.5567874	neutral	R536	0.6803769	positive	R1006	0.6090521	positive
R66	0.9440228	positive	R537	0.821058	positive	R1007	0.4846304	neutral

(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R67	0.7930245	positive	R538	0.821058	positive	R1008	0.8305485	positive
R68	0.7472749	positive	R539	0.7878678	positive	R1009	0.8178786	positive
R69	0.4599613	neutral	R540	0.8162768	positive	R1010	0.3022501	negative
R70	0.9361296	positive	R541	0.7274807	positive	R1011	0.6855978	positive
R71	0.9326364	positive	R542	0.6308829	positive	R1012	0.5923914	neutral
R72	0.6531348	positive	R543	0.6075642	positive	R1013	0.8305485	positive
R73	0.9135957	positive	R544	0.7342662	positive	R1014	0.7373891	positive
R74	0.702598	positive	R545	0.8474661	positive	R1015	0.8305485	positive
R75	0.7472749	positive	R546	0.1878882	negative	R1016	0.1240932	negative
R76	0.7315396	positive	R547	0.691228	positive	R1017	0.7472749	positive
R77	0.6955673	positive	R548	0.722623	positive	R1018	0.8305485	positive
R78	0.8305485	positive	R549	0.7821751	positive	R1019	0.6356647	positive
R79	0.2098541	negative	R550	0.5090395	neutral	R1020	0.3942194	negative
R80	0.7481594	positive	R551	0.2407176	negative	R1021	0.7299743	positive
R81	0.7177579	positive	R552	0.6746176	positive	R1022	0.568467	neutral
R82	0.7834851	positive	R553	0.8305485	positive	R1023	0.923559	positive
R83	0.8167877	positive	R554	0.6611001	positive	R1024	0.9081058	positive
R84	0.5143841	neutral	R555	0.7741315	positive	R1025	0.6791331	positive
R85	0.8409563	positive	R556	0.8639902	positive	R1026	0.7891082	positive
R86	0.8593764	positive	R557	0.7886057	positive	R1027	0.6441921	positive
R87	0.6955673	positive	R558	0.7502699	positive	R1028	0.7602156	positive
R88	0.8016587	positive	R559	0.4786817	neutral	R1029	0.7214441	positive
R89	0.8454933	positive	R560	0.2022956	negative	R1030	0.7654697	positive
R90	0.8939785	positive	R561	0.6035591	positive	R1031	0.2642515	negative
R91	0.7693409	positive	R562	0.8076053	positive	R1032	0.0877322	negative
R92	0.9467457	positive	R563	0.5664397	neutral	R1033	0.6660379	positive
R93	0.6386123	positive	R564	0.5224965	neutral	R1034	0.6866302	positive
R94	0.5699329	neutral	R565	0.6667438	positive	R1035	0.586623	neutral
R95	0.9545985	positive	R566	0.9348096	positive	R1036	0.8550771	positive
R96	0.6898487	positive	R567	0.8894199	positive	R1037	0.8192549	positive
R97	0.7562008	positive	R568	0.6492836	positive	R1038	0.752165	positive
R98	0.5143841	neutral	R569	0.4874694	neutral	R1039	0.8738756	positive
R99	0.4739333	neutral	R570	0.8026173	positive	R1040	0.5383182	neutral
R100	0.6639032	positive	R571	0.7517651	positive	R1041	0.692027	positive
R101	0.4409583	negative	R572	0.610678	positive	R1042	0.4990944	neutral
R102	0.7416089	positive	R573	0.7538462	positive	R1043	0.7473817	positive
R103	0.7119682	positive	R574	0.6824223	positive	R1044	0.8059652	positive
R104	0.8156514	positive	R575	0.610678	positive	R1045	0.6611001	positive
R105	0.7891077	positive	R576	0.5458548	neutral	R1046	0.6997316	positive
R106	0.8539953	positive	R577	0.0958751	negative	R1047	0.8965968	positive
R107	0.8876154	positive	R578	0.3469934	negative	R1048	0.7827219	positive

(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R108	0.8625386	positive	R579	0.5850652	neutral	R1049	0.7591718	positive
R109	0.7769156	positive	R580	0.9706368	positive	R1050	0.681891	positive
R110	0.8701058	positive	R581	0.9502078	positive	R1051	0.764661	positive
R111	0.9488234	positive	R582	0.3295282	negative	R1052	0.7472749	positive
R112	0.911209	positive	R583	0.7544759	positive	R1053	0.8305485	positive
R113	0.4976057	neutral	R584	0.5469252	neutral	R1054	0.865476	positive
R114	0.7472749	positive	R585	0.6611001	positive	R1055	0.865476	positive
R115	0.6699346	positive	R586	0.8305485	positive	R1056	0.7472749	positive
R116	0.8434064	positive	R587	0.5994152	neutral	R1057	0.6611001	positive
R117	0.7472749	positive	R588	0.6978475	positive	R1058	0.8305485	positive
R118	0.8305485	positive	R589	0.7046033	positive	R1059	0.7602156	positive
R119	0.7291012	positive	R590	0.444153	negative	R1060	0.6611001	positive
R120	0.9567661	positive	R591	0.6800294	positive	R1061	0.6389277	positive
R121	0.7791806	positive	R592	0.5177728	neutral	R1062	0.6467982	positive
R122	0.2976932	negative	R593	0.7204593	positive	R1063	0.6467982	positive
R123	0.6531348	positive	R594	0.6021466	positive	R1064	0.6611001	positive
R124	0.6641113	positive	R595	0.7313128	positive	R1065	0.6611001	positive
R125	0.6425169	positive	R596	0.8458167	positive	R1066	0.7101126	positive
R126	0.6531348	positive	R597	0.8221471	positive	R1067	0.7375974	positive
R127	0.5799872	neutral	R598	0.8268891	positive	R1068	0.6995103	positive
R128	0.8160791	positive	R599	0.7956292	positive	R1069	0.6611001	positive
R129	0.7929915	positive	R600	0.7341741	positive	R1070	0.6611001	positive
R130	0.8618291	positive	R601	0.7490306	positive	R1071	0.7375974	positive
R131	0.9158067	positive	R602	0.7793024	positive	R1072	0.794974	positive
R132	0.6753871	positive	R603	0.8845785	positive	R1073	0.8305485	positive
R133	0.5905267	neutral	R604	0.2043323	negative	R1074	0.8305485	positive
R134	0.6473693	positive	R605	0.9172113	positive	R1075	0.7591718	positive
R135	0.6911131	positive	R606	0.7741603	positive	R1076	0.7602156	positive
R136	0.7359412	positive	R607	0.3467986	negative	R1077	0.7474952	positive
R137	0.7714872	positive	R608	0.594448	neutral	R1078	0.6611001	positive
R138	0.8386962	positive	R609	0.0595447	negative	R1079	0.6611001	positive
R139	0.8386962	positive	R610	0.5014262	neutral	R1080	0.6611001	positive
R140	0.8065931	positive	R611	0.538413	neutral	R1081	0.6611001	positive
R141	0.7472749	positive	R612	0.5381508	neutral	R1082	0.681891	positive
R142	0.8150265	positive	R613	0.6396684	positive	R1083	0.7577989	positive
R143	0.6901976	positive	R614	0.8839372	positive	R1084	0.8305485	positive
R144	0.8456571	positive	R615	0.6151485	positive	R1085	0.6611001	positive
R145	0.7141024	positive	R616	0.5043453	neutral	R1086	0.764661	positive
R146	0.6133836	positive	R617	0.4175713	negative	R1087	0.6556966	positive
R147	0.8379534	positive	R618	0.7648325	positive	R1088	0.7415179	positive
R148	0.6611001	positive	R619	0.7578643	positive	R1089	0.8434064	positive

(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R149	0.858813	positive	R620	0.651664	positive	R1090	0.6611001	positive
R150	0.8442499	positive	R621	0.9245413	positive	R1091	0.7602156	positive
R151	0.7022787	positive	R622	0.6618469	positive	R1092	0.6386802	positive
R152	0.7871404	positive	R623	0.8688011	positive	R1093	0.7340567	positive
R153	0.8305485	positive	R624	0.9564784	positive	R1094	0.8795364	positive
R154	0.6594957	positive	R625	0.5901204	neutral	R1095	0.5691608	neutral
R155	0.6837464	positive	R626	0.7040966	positive	R1096	0.669822	positive
R156	0.811885	positive	R627	0.3104759	negative	R1097	0.8305485	positive
R157	0.603287	positive	R628	0.7465059	positive	R1098	0.4659651	neutral
R158	0.622041	positive	R629	0.7826292	positive	R1099	0.6611001	positive
R159	0.7992632	positive	R630	0.7672603	positive	R1100	0.8235698	positive
R160	0.7865716	positive	R631	0.6601776	positive	R1101	0.8434064	positive
R161	0.7791806	positive	R632	0.4843219	neutral	R1102	0.8744519	positive
R162	0.7021079	positive	R633	0.2331846	negative	R1103	0.705555	positive
R163	0.6955673	positive	R634	0.6137796	positive	R1104	0.7178872	positive
R164	0.8305485	positive	R635	0.7270753	positive	R1105	0.7472749	positive
R165	0.7968868	positive	R636	0.6574647	positive	R1106	0.8305485	positive
R166	0.7472749	positive	R637	0.2397756	negative	R1107	0.6389277	positive
R167	0.5096243	neutral	R638	0.7484301	positive	R1108	0.8804054	positive
R168	0.794974	positive	R639	0.7595987	positive	R1109	0.7019814	positive
R169	0.7729915	positive	R640	0.7216086	positive	R1110	0.7928864	positive
R170	0.7472749	positive	R641	0.7908518	positive	R1111	0.7375974	positive
R171	0.7468543	positive	R642	0.7536448	positive	R1112	0.6611001	positive
R172	0.1280982	negative	R643	0.8118449	positive	R1113	0.7342663	positive
R173	0.748786	positive	R644	0.859463	positive	R1114	0.6957691	positive
R174	0.6531348	positive	R645	0.6946951	positive	R1115	0.8305485	positive
R175	0.7046641	positive	R646	0.8645105	positive	R1116	0.7672603	positive
R176	0.7472749	positive	R647	0.8029264	positive	R1117	0.8305485	positive
R177	0.7472749	positive	R648	0.832782	positive	R1118	0.7602156	positive
R178	0.7141399	positive	R649	0.8217971	positive	R1119	0.6710054	positive
R179	0.6611001	positive	R650	0.7602156	positive	R1120	0.6630906	positive
R180	0.8895947	positive	R651	0.6611001	positive	R1121	0.8305485	positive
R181	0.6956936	positive	R652	0.8136638	positive	R1122	0.7019814	positive
R182	0.8159388	positive	R653	0.6669441	positive	R1123	0.7421685	positive
R183	0.601263	positive	R654	0.5434293	neutral	R1124	0.8517678	positive
R184	0.6611001	positive	R655	0.7691554	positive	R1125	0.7953281	positive
R185	0.8305485	positive	R656	0.7507167	positive	R1126	0.669822	positive
R186	0.7472749	positive	R657	0.1942062	negative	R1127	0.8436629	positive
R187	0.6611	positive	R658	0.8788911	positive	R1128	0.827514	positive
R188	0.711528	positive	R659	0.8257292	positive	R1129	0.6467982	positive
R189	0.8305485	positive	R660	0.9304464	positive	R1130	0.8602358	positive

(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R190	0.7891077	positive	R661	0.9598552	positive	R1131	0.7602156	positive
R191	0.6955673	positive	R662	0.4333117	negative	R1132	0.7583882	positive
R192	0.8305485	positive	R663	0.3763787	negative	R1133	0.9252206	positive
R193	0.7891077	positive	R664	0.3763787	negative	R1134	0.8305485	positive
R194	0.8234062	positive	R665	0.7525951	positive	R1135	0.6272151	positive
R195	0.8305485	positive	R666	0.8851421	positive	R1136	0.7812609	positive
R196	0.7891077	positive	R667	0.2542901	negative	R1137	0.7980213	positive
R197	0.7891077	positive	R668	0.7812371	positive	R1138	0.6386802	positive
R198	0.835991	positive	R669	0.8102257	positive	R1139	0.4951649	neutral
R199	0.7900416	positive	R670	0.6491746	positive	R1140	0.8117743	positive
R200	0.681891	positive	R671	0.8082175	positive	R1141	0.8169568	positive
R201	0.2249659	negative	R672	0.8710445	positive	R1142	0.8602358	positive
R202	0.6741735	positive	R673	0.1853348	negative	R1143	0.9111092	positive
R203	0.7464154	positive	R674	0.9685143	positive	R1144	0.6611001	positive
R204	0.7653845	positive	R675	0.7270507	positive	R1145	0.7602156	positive
R205	0.8434064	positive	R676	0.7067408	positive	R1146	0.8305485	positive
R206	0.8495325	positive	R677	0.7693409	positive	R1147	0.7723468	positive
R207	0.6611001	positive	R678	0.861834	positive	R1148	0.7445509	positive
R208	0.6611001	positive	R679	0.9316579	positive	R1149	0.8539953	positive
R209	0.6611001	positive	R680	0.7150577	positive	R1150	0.8473616	positive
R210	0.7602156	positive	R681	0.7087353	positive	R1151	0.7672846	positive
R211	0.8305485	positive	R682	0.7002212	positive	R1152	0.7771271	positive
R212	0.6611001	positive	R683	0.1513296	negative	R1153	0.8305485	positive
R213	0.8305485	positive	R684	0.6651801	positive	R1154	0.8305485	positive
R214	0.8305485	positive	R685	0.5293547	neutral	R1155	0.6149083	positive
R215	0.7472749	positive	R686	0.3988296	negative	R1156	0.7375974	positive
R216	0.6947599	positive	R687	0.5385771	neutral	R1157	0.6656711	positive
R217	0.6971781	positive	R688	0.8690441	positive	R1158	0.681891	positive
R218	0.6611001	positive	R689	0.4077024	negative	R1159	0.7617094	positive
R219	0.6611001	positive	R690	0.7684717	positive	R1160	0.8602355	positive
R220	0.9562455	positive	R691	0.7070858	positive	R1161	0.7472749	positive
R221	0.7514499	positive	R692	0.9186006	positive	R1162	0.6611001	positive
R222	0.4138503	negative	R693	0.7202059	positive	R1163	0.7602156	positive
R223	0.9859411	positive	R694	0.6328091	positive	R1164	0.7375974	positive
R224	0.8523182	positive	R695	0.5831485	neutral	R1165	0.7189466	positive
R225	0.2593245	negative	R696	0.6787099	positive	R1166	0.6611001	positive
R226	0.8424197	positive	R697	0.6581917	positive	R1167	0.7602156	positive
R227	0.8719615	positive	R698	0.6459276	positive	R1168	0.6182558	positive
R228	0.1530998	negative	R699	0.7492883	positive	R1169	0.5918664	neutral
R229	0.9432364	positive	R700	0.8964684	positive	R1170	0.7019814	positive
R230	0.6403815	positive	R701	0.6888911	positive	R1171	0.7602156	positive

(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R231	0.7405834	positive	R702	0.8789851	positive	R1172	0.7101126	positive
R232	0.7043175	positive	R703	0.8305485	positive	R1173	0.7019814	positive
R233	0.3560686	negative	R704	0.4735892	neutral	R1174	0.6149083	positive
R234	0.8583408	positive	R705	0.7672603	positive	R1175	0.8305485	positive
R235	0.8138394	positive	R706	0.7516316	positive	R1176	0.6816843	positive
R236	0.4672848	neutral	R707	0.9049842	positive	R1177	0.6611001	positive
R237	0.9976104	positive	R708	0.6947602	positive	R1178	0.7602156	positive
R238	0.6992849	positive	R709	0.8997948	positive	R1179	0.8305485	positive
R239	0.8917873	positive	R710	0.3139767	negative	R1180	0.7357783	positive
R240	0.7530568	positive	R711	0.907178	positive	R1181	0.8476591	positive
R241	0.698622	positive	R712	0.8890594	positive	R1182	0.7116781	positive
R242	0.7768639	positive	R713	0.7266997	positive	R1183	0.669822	positive
R243	0.5469695	neutral	R714	0.5315642	neutral	R1184	0.6611001	positive
R244	0.7672294	positive	R715	0.8092687	positive	R1185	0.8024024	positive
R245	0.8640001	positive	R716	0.7602156	positive	R1186	0.8820927	positive
R246	0.9621993	positive	R717	0.1498933	negative	R1187	0.6611001	positive
R247	0.9441256	positive	R718	0.7136353	positive	R1188	0.6991851	positive
R248	0.8887984	positive	R719	0.8733578	positive	R1189	0.8305485	positive
R249	0.7964827	positive	R720	0.676991	positive	R1190	0.6611001	positive
R250	0.7653341	positive	R721	0.7326052	positive	R1191	0.6611001	positive
R251	0.7923139	positive	R722	0.7985406	positive	R1192	0.6555042	positive
R252	0.1215194	negative	R723	0.7019814	positive	R1193	0.6149083	positive
R253	0.5722651	neutral	R724	0.1451341	negative	R1194	0.6611001	positive
R254	0.8212772	positive	R725	0.7091032	positive	R1195	0.7201848	positive
R255	0.9088319	positive	R726	0.681891	positive	R1196	0.6611001	positive
R256	0.4625956	neutral	R727	0.6611001	positive	R1197	0.8045077	positive
R257	0.6449572	positive	R728	0.6995103	positive	R1198	0.7602156	positive
R258	0.244767	negative	R729	0.89417	positive	R1199	0.6611001	positive
R259	0.6406685	positive	R730	0.7464273	positive	R1200	0.6386802	positive
R260	0.6600068	positive	R731	0.8305485	positive	R1201	0.73862	positive
R261	0.2185845	negative	R732	0.8867005	positive	R1202	0.8602358	positive
R262	0.4235224	negative	R733	0.6279835	positive	R1203	0.705555	positive
R263	0.7886148	positive	R734	0.8554436	positive	R1204	0.6611001	positive
R264	0.7858637	positive	R735	0.7752369	positive	R1205	0.6611001	positive
R265	0.9823269	positive	R736	0.892788	positive	R1206	0.7019814	positive
R266	0.808835	positive	R737	0.6984949	positive	R1207	0.7019814	positive
R267	0.914138	positive	R738	0.2870457	negative	R1208	0.6995103	positive
R268	0.3042385	negative	R739	0.6285703	positive	R1209	0.6389277	positive
R269	0.8536538	positive	R740	0.6467982	positive	R1210	0.6386802	positive
R270	0.7375487	positive	R741	0.733084	positive	R1211	0.6376906	positive
R271	0.5144442	neutral	R742	0.8003314	positive	R1212	0.8840659	positive

(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R272	0.409945	negative	R743	0.7216086	positive	R1213	0.9288713	positive
R273	0.8402176	positive	R744	0.6999209	positive	R1214	0.6611001	positive
R274	0.4305907	negative	R745	0.6057172	positive	R1215	0.6611001	positive
R275	0.8572995	positive	R746	0.6014299	positive	R1216	0.7662622	positive
R276	0.6087622	positive	R747	0.7870195	positive	R1217	0.7591718	positive
R277	0.8102264	positive	R748	0.6279358	positive	R1218	0.6955673	positive
R278	0.8520902	positive	R749	0.380602	negative	R1219	0.7928704	positive
R279	0.5797853	neutral	R750	0.863802	positive	R1220	0.8305485	positive
R280	0.0085553	negative	R751	0.9106387	positive	R1221	0.7472749	positive
R281	0.0033566	negative	R752	0.6611001	positive	R1222	0.7882785	positive
R282	0.8801945	positive	R753	0.7464273	positive	R1223	0.8602358	positive
R283	0.0582814	negative	R754	0.168215	negative	R1224	0.7324739	positive
R284	0.6658773	positive	R755	0.5617483	neutral	R1225	0.8744842	positive
R285	0.7627886	positive	R756	0.7614209	positive	R1226	0.8496687	positive
R286	0.5986333	neutral	R757	0.324416	negative	R1227	0.7724273	positive
R287	0.6657889	positive	R758	0.7947561	positive	R1228	0.6611001	positive
R288	0.8534163	positive	R759	0.7602156	positive	R1229	0.7308845	positive
R289	0.9579684	positive	R760	0.7635256	positive	R1230	0.8305485	positive
R290	0.810947	positive	R761	0.7967463	positive	R1231	0.8793528	positive
R291	0.7289839	positive	R762	0.8273587	positive	R1232	0.7257977	positive
R292	0.5069932	neutral	R763	0.7912191	positive	R1233	0.7240208	positive
R293	0.4553537	neutral	R764	0.6441405	positive	R1234	0.7232555	positive
R294	0.1492475	negative	R765	0.6288223	positive	R1235	0.827514	positive
R295	0.8449214	positive	R766	0.7472749	positive	R1236	0.6389277	positive
R296	0.1429617	negative	R767	0.7019814	positive	R1237	0.6611001	positive
R297	0.7636987	positive	R768	0.7576774	positive	R1238	0.747341	positive
R298	0.5985098	neutral	R769	0.8578361	positive	R1239	0.6149083	positive
R299	0.603158	positive	R770	0.820335	positive	R1240	0.7055904	positive
R300	0.4190445	negative	R771	0.6354033	positive	R1241	0.6611001	positive
R301	0.4237686	negative	R772	0.943777	positive	R1242	0.7530484	positive
R302	0.2635763	negative	R773	0.9080903	positive	R1243	0.8218547	positive
R303	0.7031201	positive	R774	0.8305485	positive	R1244	0.8305485	positive
R304	0.6279243	positive	R775	0.895261	positive	R1245	0.7947568	positive
R305	0.7319307	positive	R776	0.5104854	neutral	R1246	0.7019814	positive
R306	0.7981988	positive	R777	0.7814314	positive	R1247	0.7654945	positive
R307	0.6160892	positive	R778	0.8538436	positive	R1248	0.7221823	positive
R308	0.6359286	positive	R779	0.681891	positive	R1249	0.8226924	positive
R309	0.9582831	positive	R780	0.7992466	positive	R1250	0.7019814	positive
R310	0.9556869	positive	R781	0.6401646	positive	R1251	0.8305485	positive
R311	0.7336854	positive	R782	0.348445	negative	R1252	0.8048115	positive
R312	0.6730723	positive	R783	0.4750682	neutral	R1253	0.6922556	positive

(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R313	0.7753673	positive	R784	0.8024626	positive	R1254	0.6790944	positive
R314	0.6062468	positive	R785	0.8655787	positive	R1255	0.8305485	positive
R315	0.6594447	positive	R786	0.5747074	neutral	R1256	0.7720287	positive
R316	0.7140271	positive	R787	0.6235937	positive	R1257	0.8602355	positive
R317	0.856551	positive	R788	0.5044335	neutral	R1258	0.7019814	positive
R318	0.8412236	positive	R789	0.1743155	negative	R1259	0.6611001	positive
R319	0.5950407	neutral	R790	0.7423384	positive	R1260	0.6611001	positive
R320	0.9561781	positive	R791	0.4445347	negative	R1261	0.7472749	positive
R321	0.8714455	positive	R792	0.7664667	positive	R1262	0.8305485	positive
R322	0.6905582	positive	R793	0.6467982	positive	R1263	0.7019814	positive
R323	0.9414933	positive	R794	0.7958885	positive	R1264	0.654132	positive
R324	0.8190056	positive	R795	0.5801895	neutral	R1265	0.764661	positive
R325	0.6316151	positive	R796	0.8366903	positive	R1266	0.7001854	positive
R326	0.6764578	positive	R797	0.723748	positive	R1267	0.6467982	positive
R327	0.671827	positive	R798	0.7423382	positive	R1268	0.8025384	positive
R328	0.9176692	positive	R799	0.6309816	positive	R1269	0.6837471	positive
R329	0.7309304	positive	R800	0.56038	neutral	R1270	0.6995103	positive
R330	0.7556953	positive	R801	0.6611001	positive	R1271	0.846482	positive
R331	0.7697791	positive	R802	0.7158462	positive	R1272	0.7602156	positive
R332	0.4492257	negative	R803	0.4413213	negative	R1273	0.6467982	positive
R333	0.91224	positive	R804	0.885559	positive	R1274	0.820839	positive
R334	0.7265834	positive	R805	0.4244776	negative	R1275	0.8305485	positive
R335	0.9469268	positive	R806	0.3385247	negative	R1276	0.5431131	neutral
R336	0.9159099	positive	R807	0.6467982	positive	R1277	0.7928864	positive
R337	0.7624717	positive	R808	0.7693409	positive	R1278	0.7019814	positive
R338	0.7715499	positive	R809	0.8147027	positive	R1279	0.8602355	positive
R339	0.785107	positive	R810	0.8774621	positive	R1280	0.8754569	positive
R340	0.7280694	positive	R811	0.7350368	positive	R1281	0.7427106	positive
R341	0.8305485	positive	R812	0.6144408	positive	R1282	0.7464273	positive
R342	0.5369143	neutral	R813	0.8895527	positive	R1283	0.7082188	positive
R343	0.9144135	positive	R814	0.6892182	positive	R1284	0.6860195	positive
R344	0.9015245	positive	R815	0.7182834	positive	R1285	0.8305485	positive
R345	0.7810448	positive	R816	0.6772632	positive	R1286	0.6611001	positive
R346	0.7962034	positive	R817	0.736397	positive	R1287	0.821506	positive
R347	0.7923796	positive	R818	0.8152125	positive	R1288	0.8305485	positive
R348	0.5859264	neutral	R819	0.48248	neutral	R1289	0.6611001	positive
R349	0.6426464	positive	R820	0.8837034	positive	R1290	0.6710403	positive
R350	0.1535387	negative	R821	0.8317111	positive	R1291	0.6611001	positive
R351	0.8241747	positive	R822	0.9209423	positive	R1292	0.6725239	positive
R352	0.1889661	negative	R823	0.8178786	positive	R1293	0.8602358	positive
R353	0.6525454	positive	R824	0.1685126	negative	R1294	0.8253986	positive

(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R354	0.8077179	positive	R825	0.8827713	positive	R1295	0.8305485	positive
R355	0.8297087	positive	R826	0.7002855	positive	R1296	0.7019814	positive
R356	0.7357646	positive	R827	0.8842217	positive	R1297	0.771601	positive
R357	0.9235166	positive	R828	0.2838533	negative	R1298	0.7019814	positive
R358	0.9407263	positive	R829	0.654347	positive	R1299	0.7089347	positive
R359	0.8093653	positive	R830	0.5984912	neutral	R1300	0.6611001	positive
R360	0.5072333	neutral	R831	0.8496447	positive	R1301	0.7186474	positive
R361	0.5635612	neutral	R832	0.8389626	positive	R1302	0.6995103	positive
R362	0.494545	neutral	R833	0.4839644	neutral	R1303	0.7846682	positive
R363	0.2658511	negative	R834	0.7956921	positive	R1304	0.8305485	positive
R364	0.7303463	positive	R835	0.5945401	neutral	R1305	0.6675505	positive
R365	0.7560914	positive	R836	0.7932397	positive	R1306	0.6917588	positive
R366	0.7515352	positive	R837	0.8347442	positive	R1307	0.6955673	positive
R367	0.0044986	negative	R838	0.6217058	positive	R1308	0.6421344	positive
R368	0.644827	positive	R839	0.6467982	positive	R1309	0.764661	positive
R369	0.7224079	positive	R840	0.6329754	positive	R1310	0.666675	positive
R370	0.801043	positive	R841	0.846482	positive	R1311	0.6962264	positive
R371	0.8579922	positive	R842	0.7865374	positive	R1312	0.8735304	positive
R372	0.9155726	positive	R843	0.8265834	positive	R1313	0.8305485	positive
R373	0.7565763	positive	R844	0.8840331	positive	R1314	0.4986174	neutral
R374	0.7984842	positive	R845	0.6611001	positive	R1315	0.7853218	positive
R375	0.694162	positive	R846	0.8634373	positive	R1316	0.8451766	positive
R376	0.7565763	positive	R847	0.835991	positive	R1317	0.8496687	positive
R377	0.694162	positive	R848	0.841395	positive	R1318	0.7494262	positive
R378	0.9724443	positive	R849	0.6360002	positive	R1319	0.6556966	positive
R379	0.58489	neutral	R850	0.8258535	positive	R1320	0.694374	positive
R380	0.5900856	neutral	R851	0.8773632	positive	R1321	0.7240208	positive
R381	0.9460763	positive	R852	0.5759051	neutral	R1322	0.8305485	positive
R382	0.7921348	positive	R853	0.7019814	positive	R1323	0.8434064	positive
R383	0.7168004	positive	R854	0.784488	positive	R1324	0.9800476	positive
R384	0.7036594	positive	R855	0.8305485	positive	R1325	0.7375974	positive
R385	0.2266897	negative	R856	0.6611001	positive	R1326	0.5856116	neutral
R386	0.7445059	positive	R857	0.3295504	negative	R1327	0.7812609	positive
R387	0.7323812	positive	R858	0.6386802	positive	R1328	0.8002915	positive
R388	0.685326	positive	R859	0.3827698	negative	R1329	0.7019814	positive
R389	0.6955101	positive	R860	0.8527919	positive	R1330	0.7602156	positive
R390	0.8718017	positive	R861	0.5254598	neutral	R1331	0.8305485	positive
R391	0.920563	positive	R862	0.9226313	positive	R1332	0.8554584	positive
R392	0.6762221	positive	R863	0.8076816	positive	R1333	0.5860744	neutral
R393	0.1969451	negative	R864	0.681891	positive	R1334	0.8305485	positive
R394	0.4553573	neutral	R865	0.8117214	positive	R1335	0.8305485	positive

(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R395	0.6807843	positive	R866	0.6938875	positive	R1336	0.6789926	positive
R396	0.8631627	positive	R867	0.8863931	positive	R1337	0.7201848	positive
R397	0.8227515	positive	R868	0.8525718	positive	R1338	0.7201848	positive
R398	0.6541172	positive	R869	0.6257278	positive	R1339	0.6467982	positive
R399	0.7270014	positive	R870	0.8611465	positive	R1340	0.7125681	positive
R400	0.3465677	negative	R871	0.7872285	positive	R1341	0.8539953	positive
R401	0.5213123	neutral	R872	0.7204943	positive	R1342	0.8449302	positive
R402	0.9348431	positive	R873	0.3339491	negative	R1343	0.7473415	positive
R403	0.8704526	positive	R874	0.7784423	positive	R1344	0.8027167	positive
R404	0.802137	positive	R875	0.8654665	positive	R1345	0.7019814	positive
R405	0.7426768	positive	R876	0.6494856	positive	R1346	0.8294253	positive
R406	0.6063358	positive	R877	0.8117743	positive	R1347	0.5558175	neutral
R407	0.7785429	positive	R878	0.6699237	positive	R1348	0.73154	positive
R408	0.8682751	positive	R879	0.654347	positive	R1349	0.7019814	positive
R409	0.643443	positive	R880	0.5456275	neutral	R1350	0.7375974	positive
R410	0.7433136	positive	R881	0.8496687	positive	R1351	0.6611001	positive
R411	0.8587917	positive	R882	0.8328165	positive	R1352	0.8305485	positive
R412	0.7824523	positive	R883	0.7929714	positive	R1353	0.6725239	positive
R413	0.4740091	neutral	R884	0.8611899	positive	R1354	0.6725239	positive
R414	0.664981	positive	R885	0.8318281	positive	R1355	0.6809612	positive
R415	0.9128533	positive	R886	0.8305485	positive	R1356	0.6611001	positive
R416	0.7935686	positive	R887	0.7602156	positive	R1357	0.7307568	positive
R417	0.7793663	positive	R888	0.6611001	positive	R1358	0.8305485	positive
R418	0.9542531	positive	R889	0.8164474	positive	R1359	0.6955673	positive
R419	0.3599471	negative	R890	0.69476	positive	R1360	0.7843143	positive
R420	0.8254982	positive	R891	0.7820373	positive	R1361	0.8445349	positive
R421	0.8169646	positive	R892	0.8305485	positive	R1362	0.9671077	positive
R422	0.656702	positive	R893	0.5635898	neutral	R1363	0.7101126	positive
R423	0.8769725	positive	R894	0.690401	positive	R1364	0.669822	positive
R424	0.656702	positive	R895	0.6744089	positive	R1365	0.764661	positive
R425	0.7361898	positive	R896	0.8305485	positive	R1366	0.6374433	positive
R426	0.7956635	positive	R897	0.5342009	neutral	R1367	0.669822	positive
R427	0.8305485	positive	R898	0.7221823	positive	R1368	0.6611001	positive
R428	0.5455343	neutral	R899	0.847551	positive	R1369	0.6611001	positive
R429	0.2159062	negative	R900	0.7602156	positive	R1370	0.6611001	positive
R430	0.8305485	positive	R901	0.8559886	positive	R1371	0.8913264	positive
R431	0.5832	neutral	R902	0.7283617	positive	R1372	0.6980946	positive
R432	0.7644385	positive	R903	0.6611001	positive	R1373	0.7472749	positive
R433	0.4740091	neutral	R904	0.5953985	neutral	R1374	0.6611001	positive
R434	0.6690257	positive	R905	0.6629701	positive	R1375	0.6710054	positive
R435	0.9128533	positive	R906	0.7019814	positive	R1376	0.797404	positive

(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R436	0.7935686	positive	R907	0.8043419	positive	R1377	0.6922556	positive
R437	0.7793663	positive	R908	0.812019	positive	R1378	0.7409365	positive
R438	0.7730182	positive	R909	0.8305485	positive	R1379	0.6922556	positive
R439	0.9542531	positive	R910	0.8781576	positive	R1380	0.7864207	positive
R440	0.3599471	negative	R911	0.9193544	positive	R1381	0.764661	positive
R441	0.8254982	positive	R912	0.6243291	positive	R1382	0.6496615	positive
R442	0.8207776	positive	R913	0.3066781	negative	R1383	0.669822	positive
R443	0.656702	positive	R914	0.7960042	positive	R1384	0.6611001	positive
R444	0.8769725	positive	R915	0.8000612	positive	R1385	0.7642096	positive
R445	0.656702	positive	R916	0.6292144	positive	R1386	0.681891	positive
R446	0.7361898	positive	R917	0.8475353	positive	R1387	0.7591718	positive
R447	0.8193457	positive	R918	0.3884117	negative	R1388	0.7855486	positive
R448	0.8571649	positive	R919	0.9001968	positive	R1389	0.7046641	positive
R449	0.8366705	positive	R920	0.8984454	positive	R1390	0.5500197	neutral
R450	0.8305485	positive	R921	0.671647	positive	R1391	0.6611001	positive
R451	0.5455343	neutral	R922	0.7125681	positive	R1392	0.6922556	positive
R452	0.2376858	negative	R923	0.8582619	positive	R1393	0.669822	positive
R453	0.8305485	positive	R924	0.7401108	positive	R1394	0.7672846	positive
R454	0.5922846	neutral	R925	0.9410473	positive	R1395	0.764661	positive
R455	0.7910808	positive	R926	0.5311187	neutral	R1396	0.8827895	positive
R456	0.3499212	negative	R927	0.8493227	positive	R1397	0.8643067	positive
R457	0.741518	positive	R928	0.7754928	positive	R1398	0.7973486	positive
R458	0.6264915	positive	R929	0.27313	negative	R1399	0.7927526	positive
R459	0.7032809	positive	R930	0.6363224	positive	R1400	0.7038438	positive
R460	0.7300866	positive	R931	0.439169	negative	R1401	0.8744842	positive
R461	0.6999859	positive	R932	0.7834613	positive	R1402	0.7821327	positive
R462	0.809139	positive	R933	0.7076809	positive	R1403	0.7672846	positive
R463	0.6521444	positive	R934	0.8596234	positive	R1404	0.8711904	positive
R464	0.9138173	positive	R935	0.7828498	positive	R1405	0.7759849	positive
R465	0.8576018	positive	R936	0.6611001	positive	R1406	0.7602165	positive
R466	0.9896109	positive	R937	0.7596571	positive	R1407	0.7472749	positive
R467	0.8815878	positive	R938	0.6611001	positive	R1408	0.8434064	positive
R468	0.3267159	negative	R939	0.8875806	positive	R1409	0.7602156	positive
R469	0.8011831	positive	R940	0.0689021	negative	R1410	0.69476	positive
R470	0.8546215	positive	R941	0.7672846	positive	R1411	0.6955031	positive
R471	0.6865198	positive						

9. Pet Park Reviews

Table A1.9 Distribution of Sentiment Analysis Online Reviews of Pet Park

Reviews	Sentiment Score	Sentiment Predicate	Reviews	Sentiment Score	Sentiment Predicate	Reviews	Sentiment Score	Sentiment Predicate
(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R1	0.7915264	positive	R69	0.2002967	negative	R136	0.8024702	positive
R2	0.5981933	neutral	R70	0.1869816	negative	R137	0.7978725	positive
R3	0.7585629	positive	R71	0.9062636	positive	R138	0.2366007	negative
R4	0.9325716	positive	R72	0.8151352	positive	R139	0.6611001	positive
R5	0.8813916	positive	R73	0.7519243	positive	R140	0.7472749	positive
R6	0.5010853	neutral	R74	0.7258799	positive	R141	0.7118188	positive
R7	0.5198808	neutral	R75	0.7433394	positive	R142	0.6533775	positive
R8	0.5917603	neutral	R76	0.6952512	positive	R143	0.5497686	neutral
R9	0.9443635	positive	R77	0.8519427	positive	R144	0.7109286	positive
R10	0.9271894	positive	R78	0.7363774	positive	R145	0.6611001	positive
R11	0.85612	positive	R79	0.5797432	neutral	R146	0.8975982	positive
R12	0.8305485	positive	R80	0.7058505	positive	R147	0.5536409	neutral
R13	0.4299795	negative	R81	0.0987314	negative	R148	0.3819703	negative
R14	0.3133678	negative	R82	0.7582589	positive	R149	0.7019814	positive
R15	0.8971806	positive	R83	0.7693563	positive	R150	0.6504603	positive
R16	0.9313619	positive	R84	0.604332	positive	R151	0.7121068	positive
R17	0.7454192	positive	R85	0.769556	positive	R152	0.7602156	positive
R18	0.7066424	positive	R86	0.7136285	positive	R153	0.2803166	negative
R19	0.2963565	negative	R87	0.7195957	positive	R154	0.8711793	positive
R20	0.4292196	negative	R88	0.6116565	positive	R155	0.5382835	neutral
R21	0.6874419	positive	R89	0.6697388	positive	R156	0.805706	positive
R22	0.8887392	positive	R90	0.6315072	positive	R157	0.6257268	positive
R23	0.5609543	neutral	R91	0.9151252	positive	R158	0.0433028	negative
R24	0.8313521	positive	R92	0.8355126	positive	R159	0.8508347	positive
R25	0.832252	positive	R93	0.9886537	positive	R160	0.6611001	positive
R26	0.8778111	positive	R94	0.6412379	positive	R161	0.3963826	negative
R27	0.800828	positive	R95	0.8051886	positive	R162	0.8305485	positive
R28	0.8163828	positive	R96	0.5166575	neutral	R163	0.9713318	positive
R29	0.0757434	negative	R97	0.7570332	positive	R164	0.6611001	positive
R30	0.1457109	negative	R98	0.6509743	positive	R165	0.7644981	positive
R31	0.6915962	positive	R99	0.2799983	negative	R166	0.7602156	positive
R32	0.8305485	positive	R100	0.6116565	positive	R167	0.8471497	positive
R33	0.6955673	positive	R101	0.8268874	positive	R168	0.7869905	positive
R34	0.7126263	positive	R102	0.7204003	positive	R169	0.627789	positive

(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
R35	0.8226051	positive	R103	0.4925682	neutral	R170	0.3560624	negative
R36	0.6108116	positive	R104	0.7957733	positive	R171	0.9307616	positive
R37	0.8966658	positive	R105	0.4382346	negative	R172	0.8178786	positive
R38	0.7438312	positive	R106	0.6209494	positive	R173	0.6513402	positive
R39	0.6858931	positive	R107	0.8305485	positive	R174	0.7917656	positive
R40	0.8305485	positive	R108	0.6611001	positive	R175	0.7046034	positive
R41	0.7472749	positive	R109	0.0071201	negative	R176	0.5863059	neutral
R42	0.6533779	positive	R110	0.7546708	positive	R177	0.6613404	positive
R43	0.6611001	positive	R111	0.4905388	neutral	R178	0.6042542	positive
R44	0.569379	neutral	R112	0.2358507	negative	R179	0.8467429	positive
R45	0.6611001	positive	R113	0.8418446	positive	R180	0.8332306	positive
R46	0.2038357	negative	R114	0.6066194	positive	R181	0.9854614	positive
R47	0.2582993	negative	R115	0.8477783	positive	R182	0.4897789	neutral
R48	0.3945081	negative	R116	0.8406377	positive	R183	0.6077235	positive
R49	0.4041305	negative	R117	0.7483285	positive	R184	0.5972316	neutral
R50	0.2207783	negative	R118	0.9314296	positive	R185	0.6856996	positive
R51	0.9037971	positive	R119	0.9019042	positive	R186	0.6337218	positive
R52	0.0682045	negative	R120	0.7464273	positive	R187	0.6735182	positive
R53	0.7794883	positive	R121	0.5384601	neutral	R188	0.4221773	negative
R54	0.4622599	neutral	R122	0.6273266	positive	R189	0.5972317	neutral
R55	0.7293964	positive	R123	0.393768	negative	R190	0.7019814	positive
R56	0.3293672	negative	R124	0.8623883	positive	R191	0.5844708	neutral
R57	0.8239759	positive	R125	0.6860089	positive	R192	0.6602772	positive
R58	0.7024822	positive	R126	0.7824836	positive	R193	0.5898808	neutral
R59	0.8935724	positive	R127	0.1711169	negative	R194	0.6611001	positive
R60	0.3153911	negative	R128	0.7015833	positive	R195	0.6467982	positive
R61	0.7739186	positive	R129	0.5469252	neutral	R196	0.6611001	positive
R62	0.712164	positive	R130	0.7891077	positive	R197	0.6611001	positive
R63	0.7605623	positive	R131	0.6630179	positive	R198	0.6611001	positive
R64	0.7105877	positive	R132	0.7023217	positive	R199	0.6955673	positive
R65	0.6226243	positive	R133	0.8581718	positive	R200	0.7019814	positive
R66	0.683821	positive	R134	0.7121631	positive	R201	0.9529776	positive
R67	0.2717563	negative	R135	0.5670546	neutral	R202	0.8305485	positive
R68	0.6376715	positive						

10. Inclusion Park Reviews

Table A1.10 Distribution of Sentiment Analysis Online Reviews of Inclusion Park

Reviews	Sentiment Score	Sentiment Predicate	Reviews	Sentiment Score	Sentiment Predicate	Reviews	Sentiment Score	Sentiment Predicate
R1	0.562692	neutral	R11	0.5762233	neutral	R21	0.6611001	positive
R2	0.7187721	positive	R12	0.2060072	negative	R22	0.8405245	positive
R3	0.577913	neutral	R13	0.9432405	positive	R23	0.7595953	positive
R4	0.8285213	positive	R14	0.366423	negative	R24	0.7313523	positive
R5	0.9457668	positive	R15	0.6278235	positive	R25	0.8305485	positive
R6	0.5031406	neutral	R16	0.5133682	neutral	R26	0.6467982	positive
R7	0.8550926	positive	R17	0.9812657	positive	R27	0.6611001	positive
R8	0.2057707	negative	R18	0.8082401	positive	R28	0.8773632	positive
R9	0.6759062	positive	R19	0.6947602	positive	R29	0.7472749	positive
R10	0.3020498	negative	R20	0.5565152	neutral	R30	0.7313523	positive

Appendix 2. Survey Field Data

1. Sample of Respondent in Superhero Park (Indonesian language)

THE UNIVERSITY OF KITAKYUSHU, JAPAN
Environmental Engineering
Address: 1-1 Hibikino, Wakamatsu-ku, Kitakyushu-shi, Fukuoka

KUESIONER PENELITIAN
Visitor's Perception of Thematic Park in Bandung City
Pendapat Pengunjung tentang Taman Tematik di Kota Bandung

No : A
Waktu : 8.05
Hari / Tanggal : Sabtu 13-09-2019
Nama Taman : Taman Superhero

1. Nama : Dewi Permata
2. Jenis Kelamin : ☐ Laki-laki ☑ Perempuan
3. Umur : 24
4. Pendidikan : Sma
5. Pekerjaan : Ibu rumah tangga
6. Asal

   a. Untuk yang berdomisili di Bandung

      Alamat : Jl. Samsi III

      Jarak dari tempat tinggal ke taman ini: 2 km.

   b. Untuk yang berdomisili di luar Bandung

      Kota Asal:

7. Tujuan datang ke taman ini : Ajak main anak

8. Kegiatan yang dilakukan di taman:

   Ngajak jalan anak² sambil ngasuh.

9. Pendapat anda tentang taman ini :

   Ada beberapa patung superheronya, ada wahana bermain anak, banyak yang jualan juga, lumaya sejuk juga.

10. Kritik dan saran:

   AREA parkirnya kurang luas.

Kami mengucapakan terima kasih atas waktu dan partisipasinya mengisi kuesioner ini.

2. Sample of Respondent in Centrum Music Park (Indonesian language)

THE UNIVERSITY OF KITAKYUSHU, JAPAN
Environmental Engineering
Address: 1-1 Hibikino, Wakamatsu-ku, Kitakyushu-shi, Fukuoka

KUESIONER PENELITIAN
Visitor's Perception of Thematic Park in Bandung City
Pendapat Pengunjung tentang Taman Tematik di Kota Bandung

No : 16.
Waktu : 13.20.
Hari / Tanggal : Sabtu, 13. 4. 2015.
Nama Taman : **Taman Musik Centrum**

1. Nama : ACHMAD RAMDHANI
2. Jenis Kelamin : ☑ Laki-laki ☐ Perempuan
3. Umur : 23.
4. Pendidikan : mahasiswa.
5. Pekerjaan :
6. Asal

   a. Untuk yang berdomisili di Bandung

   Alamat : Bg. Hongka suni

   Jarak dari tempat tinggal ke taman ini: 2,6 km.

   b. Untuk yang berdomisili di luar Bandung

   Kota Asal:

7. Tujuan datang ke taman ini : NONGKRONG.

8. Kegiatan yang dilakukan di taman:

   NONGKRONG² sambil Ngobrol sama temen.

9. Pendapat anda tentang taman ini :

   Tamannya nyaman buat nongkrong.
   Indah, asri, dan lumayan rindang.

10. Kritik dan saran:

   keberahannya tidak di jaga.

Kami mengucapakan terima kasih atas waktu dan partisipasinya mengisi kuesioner ini.

3. Sample of Respondent in Photo Park (Indonesian language)

THE UNIVERSITY OF KITAKYUSHU, JAPAN
Environmental Engineering
Address: 1-1 Hibikino, Wakamatsu-ku, Kitakyushu-shi, Fukuoka

KUESIONER PENELITIAN
Visitor's Perception of Thematic Park in Bandung City
Pendapat Pengunjung tentang Taman Tematik di Kota Bandung

No   : 4.
Waktu   : 12 :44
Hari / Tanggal : RABU 20 Maret 2019
Nama Taman : **Taman Photo**

1. Nama   : NIKO.P
2. Jenis Kelamin : [✓] Laki-laki   [ ] Perempuan
3. Umur   : 17
4. Pendidikan   : SMK
5. Pekerjaan   : Pelajar
6. Asal

   a. *Untuk yang berdomisili di Bandung*

      Alamat   : Jl. Pasir impun

      Jarak dari tempat tinggal ke taman ini: 5.7 km.

   b. *Untuk yang berdomisili di luar Bandung*

      Kota Asal: BANDUNG

7. Tujuan datang ke taman ini : Main

8. Kegiatan yang dilakukan di taman:

   Nongkrong

9. Pendapat anda tentang taman ini :

   bersih .nyaman

10. Kritik dan saran:

   bisa meningkatkan kebersihan dan disiplin

Kami mengucapakan terima kasih atas waktu dan partisipasinya mengisi kuesioner ini.

4. Sample of Respondent in Gesit Park (Indonesian language)

THE UNIVERSITY OF KITAKYUSHU, JAPAN
Environmental Engineering
Address: 1-1 Hibikino, Wakamatsu-ku, Kitakyushu-shi, Fukuoka

KUESIONER PENELITIAN
Visitor's Perception of Thematic Park in Bandung City
Pendapat Pengunjung tentang Taman Tematik di Kota Bandung

No : 31
Waktu : 14.53.
Hari / Tanggal : Selasa, 23-4-2019.
Nama Taman : Taman Gesit

1. Nama : Rafly.
2. Jenis Kelamin : ☑ Laki-laki   ☐ Perempuan
3. Umur : 15.
4. Pendidikan : SMA
5. Pekerjaan : Tidak bekerja.
6. Asal

a. Untuk yang berdomisili di Bandung

Alamat : Jl. Sari Asih.

Jarak dari tempat tinggal ke taman ini: 714km.

b. Untuk yang berdomisili di luar Bandung

Kota Asal:

7. Tujuan datang ke taman ini : Jalan Jalan.

8. Kegiatan yang dilakukan di taman:

Duduk duduk sajah.

9. Pendapat anda tentang taman ini :

Adem, Unik bentuknya.

10. Kritik dan saran:

Sudah mulai tidak terawat.

Kami mengucapakan terima kasih atas waktu dan partisipasinya mengisi kuesioner ini.

5. Sample of Respondent in Fitness Park (Indonesian language)

THE UNIVERSITY OF KITAKYUSHU, JAPAN
Environmental Engineering
Address: 1-1 Hibikino, Wakamatsu-ku, Kitakyushu-shi, Fukuoka

KUESIONER PENELITIAN
Visitor's Perception of Thematic Park in Bandung City
Pendapat Pengunjung tentang Taman Tematik di Kota Bandung

No : 67.
Waktu : 8.51.
Hari / Tanggal : Selasa, 23.4.2019.
Nama Taman : **Taman Fitness**

1. Nama : FIRDAUS.
2. Jenis Kelamin : ☑ Laki-laki ☐ Perempuan
3. Umur : 21.
4. Pendidikan : Sma.
5. Pekerjaan : Tidak bekerja.
6. Asal

   a. *Untuk yang berdomisili di Bandung*

   Alamat : Jl. Sadang Saip.

   Jarak dari tempat tinggal ke taman ini: 900m.

   b. *Untuk yang berdomisili di luar Bandung*

   Kota Asal:

7. Tujuan datang ke taman ini : Main

8. Kegiatan yang dilakukan di taman:

   Nongkrong.

9. Pendapat anda tentang taman ini :

   Tamannya menarik karena ada alat² fitnesnya.
   Tamannya lumayan adem sejuk nyaman.

10. Kritik dan saran:

    Tempat duduk dan toiletnya.

Kami mengucapakan terima kasih atas waktu dan partisipasinya mengisi kuesioner ini.

6. Sample of Respondent in Jomblo Park (Indonesian language)

THE UNIVERSITY OF KITAKYUSHU, JAPAN
Environmental Engineering
Address: 1-1 Hibikino, Wakamatsu-ku, Kitakyushu-shi, Fukuoka

KUESIONER PENELITIAN
Visitor's Perception of Thematic Park in Bandung City
Pendapat Pengunjung tentang Taman Tematik di Kota Bandung

No   : 71
Waktu   : 9.38
Hari / Tanggal : Selasa, 16.4. 2019
Nama Taman : Taman Jomblo

1. Nama   : suhendar.
2. Jenis Kelamin : ☑ Laki-laki   ☐ Perempuan
3. Umur   : 33.
4. Pendidikan   : sma.
5. Pekerjaan   : selles.
6. Asal

    a. Untuk yang berdomisili di Bandung

    Alamat   : Jl. Gardung.

    Jarak dari tempat tinggal ke taman ini: 5 km.

    b. Untuk yang berdomisili di luar Bandung

    Kota Asal:

7. Tujuan datang ke taman ini : Istirahat

8. Kegiatan yang dilakukan di taman:

melepas lelah.

9. Pendapat anda tentang taman ini :

Lumayan nyaman, bersih, adem.
Tapi bising suara kendaraan.

10. Kritik dan saran:

No comment.

Kami mengucapakan terima kasih atas waktu dan partisipasinya mengisi kuesioner ini.

7. Sample of Respondent in Film Park (Indonesian language)

THE UNIVERSITY OF KITAKYUSHU, JAPAN
Environmental Engineering
Address: 1-1 Hibikino, Wakamatsu-ku, Kitakyushu-shi, Fukuoka

KUESIONER PENELITIAN
Visitor's Perception of Thematic Park in Bandung City
Pendapat Pengunjung tentang Taman Tematik di Kota Bandung

No : 23
Waktu : 11:36
Hari / Tanggal : minggu / 7 april 2019
Nama Taman : **Taman Film**

1. Nama : RAHMI Hikmah
2. Jenis Kelamin : ☐ Laki-laki ☑ Perempuan
3. Umur : 30
4. Pendidikan : S1
5. Pekerjaan : karyawan swasta
6. Asal

   a. Untuk yang berdomisili di Bandung

   Alamat : JL. SETIA BUDHI

   Jarak dari tempat tinggal ke taman ini: 5.7 km

   b. Untuk yang berdomisili di luar Bandung

   Kota Asal:

7. Tujuan datang ke taman ini : NUNGGU ANAK

8. Kegiatan yang dilakukan di taman:

   NUNGGU ANAK LATIHAN TAEKWONDO.

9. Pendapat anda tentang taman ini :

   BERSIH DAN NYAMAN.
   VIEWNYA lumayan bagus.
   Rumput Antehnya masih lumayan bagus.

10. Kritik dan saran:

   Megatronnya jarang nyala.

Kami mengucapakan terima kasih atas waktu dan partisipasinya mengisi kuesioner ini.

8. Sample of Respondent in Lansia Park (Indonesian language)

THE UNIVERSITY OF KITAKYUSHU, JAPAN
Environmental Engineering
Address: 1-1 Hibikino, Wakamatsu-ku, Kitakyushu-shi, Fukuoka

KUESIONER PENELITIAN
Visitor's Perception of Thematic Park in Bandung City
Pendapat Pengunjung tentang Taman Tematik di Kota Bandung

No : 95.
Waktu : 14:50
Hari / Tanggal : minggu / 24 maret 2019.
Nama Taman : **Taman Lansia**

1. Nama : TAma
2. Jenis Kelamin : ☑ Laki-laki ☐ Perempuan
3. Umur : 10.
4. Pendidikan : Sma.
5. Pekerjaan : kerja.
6. Asal

   a. *Untuk yang berdomisili di Bandung*

   Alamat : CIkutra.

   Jarak dari tempat tinggal ke taman ini: 2,0 km.

   b. *Untuk yang berdomisili di luar Bandung*

   Kota Asal:

7. Tujuan datang ke taman ini : Santai - santai
8. Kegiatan yang dilakukan di taman:

   Jalan-jalan, Pto-Foto.

9. Pendapat anda tentang taman ini :

   BAgus, kurang bersih

10. Kritik dan saran:

    Ditingkatkan lagi kebersihan area taman.

Kami mengucapkan terima kasih atas waktu dan partisipasinya mengisi kuesioner ini.

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9. Sample of Respondent in Pet Park (Indonesian language)

THE UNIVERSITY OF KITAKYUSHU, JAPAN
Environmental Engineering
Address: 1-1 Hibikino, Wakamatsu-ku, Kitakyushu-shi, Fukuoka

KUESIONER PENELITIAN
Visitor's Perception of Thematic Park in Bandung City
Pendapat Pengunjung tentang Taman Tematik di Kota Bandung

No : 15.
Waktu : 7.12
Hari / Tanggal : Senin, 6-5-2019.
Nama Taman : Pet Park

1. Nama : ELVIRA.
2. Jenis Kelamin : ☐ Laki-laki   ☑ Perempuan
3. Umur : 21.
4. Pendidikan : mahasiswi
5. Pekerjaan :
6. Asal

   a. *Untuk yang berdomisili di Bandung*

   Alamat : Jl. Lingga wastu

   Jarak dari tempat tinggal ke taman ini: 4.0km.

   b. *Untuk yang berdomisili di luar Bandung*

   Kota Asal:

7. Tujuan datang ke taman ini : main.

8. Kegiatan yang dilakukan di taman:

   Kumpul 2x, GATHERING.

9. Pendapat anda tentang taman ini :

   Tempatnya asik buat nongkrong dan bersantai bareng temen sambil bawa peliharaan.

10. Kritik dan saran:

    ARENA Bermain untuk peliharaan sudah rusak 2x.

Kami mengucapakan terima kasih atas waktu dan partisipasinya mengisi kuesioner ini.

10. Sample of Respondent in Inclusion Park (Indonesian language)

THE UNIVERSITY OF KITAKYUSHU, JAPAN
Environmental Engineering
Address: 1-1 Hibikino, Wakamatsu-ku, Kitakyushu-shi, Fukuoka

北九州市立大学
THE UNIVERSITY OF KITAKYUSHU

KUESIONER PENELITIAN
Visitor's Perception of Thematic Park in Bandung City
Pendapat Pengunjung tentang Taman Tematik di Kota Bandung

No   : 76
Waktu   : 14:03 .
Hari / Tanggal   : selasa / 19 maret 2019 .
Nama Taman   : **Taman Inklusi**

1. Nama   : AULIA .
2. Jenis Kelamin   : ☐ Laki-laki   ☑ Perempuan
3. Umur   : 17. thn
4. Pendidikan   : SMA
5. Pekerjaan   : pelajar .
6. Asal

   a. Untuk yang berdomisili di Bandung

      Alamat   : Babakan ciamis

      Jarak dari tempat tinggal ke taman ini: ±2.5 km

   b. Untuk yang berdomisili di luar Bandung

      Kota Asal: Bandung.

7. Tujuan datang ke taman ini : oahraga .

8. Kegiatan yang dilakukan di taman:

   Jalan-jalan sambil oahraga .

9. Pendapat anda tentang taman ini :

   Tempatnya nyaman dan cukup bersih

10. Kritik dan saran:

    TOILETNYA kurang nyaman .

Kami mengucapakan terima kasih atas waktu dan partisipasinya mengisi kuesioner ini.

2. Questionnaire of Respondents' Opinion Data

Table A2.3 Survey Data Opinion of Superhero Park (translate from Indonesian language)

No	Opinion
1	there are a number of superhero statues, there are children's playgrounds and quite cool the
2	park is pretty good, cool, comfortable but the superhero statues have started to break the
3	garden is good for playing children because there are facilities for children to play a
4	nice place to relax and lots of trees
5	nice garden, there are statue superhero suitable for children
6	suitable for kids, but a lot of junk
7	comfortable place for rest, cool and lots of trees
8	garden is suitable for children's play
9	garden is passable clean, comfortable and cool
10	garden is unique, there are statues of superheroes, but there are decaying
11	place comfortable, pretty clean and suitable for children
12	a comfortable place for children to play
13	Comfortable and cool
14	recreation places recommended for playing children because there are many children's playgrounds and superhero statues
15	Clean, comfortable but dear Children playgrounds often ride by adults
16	The park is quite comfortable and cool but unfortunately it's a bit shabby The
17	park is pretty good and unique, cool and lots of trees
18	Grounds were nice, comfortable and there is a playground of children
19	Recommended place for take the kids to play as many rides child's play, then there is a statue superhero
20	Outdoor park suitable children's playground, facilities child's play there though like ridden adults
21	Suitable for child's play ran and families, airy and comfortable
22	garden is poorly maintained there was some garbage collection, started in the broken chair
23	Pretty clean, comfortable lots of hanging
24	Suitable for children to play, and lots of trees cozy,
25	cool comfortable and quiet clean
26	Less manicured some damaged facilities ranging
27	Grounds less well maintained, the seats are broken and the statues begin to break down
28	Park facilities are quite complete, cool and lots of shady trees
29	Free suitable for children because many rides play children The
30	place is cool, there are children's playgrounds and superhero sculptures but poorly maintained
31	Not maintained many facilities are starting to break down
32	Suitable for hanging out, comfortable, pretty clean and cool
33	Park good for playing children, clean, comfortable and cool
34	Quite spacious, comfortable for children playing and lots of snacks The
35	garden is quite spacious, beautiful, clean and lots of trees
36	Comfortable, calm and many are selling The
37	garden is comfortable, pretty clean, cool and suitable for and cool
38	Poorly maintained and facilities begin to break down The
39	place is good for playing children and the air is cool
40	Pretty clean, comfortable and cool The
41	park is nice, unique, comfortable and lots of children's playgrounds The
42	place is suitable for children even though there are some rides starting to break
43	Pretty clean, shady trees
44	Places recreation that is suitable for children and playground but is poorly maintained
45	Good, comfortable, cool but poorly maintained
46	Less well maintained The
47	garden is unique because of superhero statues The
48	place is comfortable and cool for hanging out and the air is cool
49	Cool and comfortable
50	Good, cool and comfortable
51	Pretty good and good The
52	air is fresh and comfortable but not maintained The
53	place is pretty good, cool and interesting
54	Good location easy to reach
55	There is free Wi-Fi s

56	Convenient no toilets are also
57	favorite children because many statues of superheroes and playing facilities
58	Good, passable there is a rest area
59	less well-maintained
60	place to relax many trees it was cool
61	Good, many facilities children's playground suitable for children
62	Cool, let alone position is the middle of the city and free Wi -Fi
63	Cheap tourist park Meriah. Suitable for children to play but not well maintained
64	garden is comfortable, pretty clean And many rides play children but less spacious The
65	garden is nice, comfortable And there are many trees and there is a place to play children
66	Pretty good and comfortable There is a place to play children but less well-maintained
67	place is quite unique and interesting, clean and cool and suitable for children The
68	place is comfortable and cool and quite spacious but less well-maintained
69	place suitable for children's play and hangout and also cool
70	Garden is pretty cool, comfortable and also lots of snacks. but less well maintained the
71	Place is good for families and children. many children play rides and unique because the superhero statues are
72	comfortable and suitable for children and families The
73	park is pretty good, comfortable, cool and clean but many facilities are damaged
74	Cool, clean and quite beautiful. Suitable for children playing because there are many playgrounds and superhero statues. but less well-maintained
75	Suitable for children's playgrounds and adult hangouts. pretty cool and comfortable
76	Many trees, cool, comfortable and suitable for children playing and family
77	pretty good and comfortable but the toilet does not function properly
78	where it is cool, comfortable and good for hanging out many traders so it is not difficult to find food The
79	place is quite comfortable, cool, but there is
80	Garden cool, nice, unique and comfortable. many trees are
81	Pretty comfortable for hanging out and refreshing. cool because there are lots of trees
82	Suitable for children to play because there are children's playgrounds and there are statues of superheroes that are
83	Park not maintained, many facilities are damaged, toilets do not work and superhero statues are broken
84	quite good and shady but less spacious
85	Suitable for hanging out with family and children but
86	Not spacious enough but not good enough to hang out. the garden is cool because many trees have
87	many damaged and dirty facilities that are
88	nice and unique
89	comfortable, clean and suitable for children
90	unique, pretty clean, cool and comfortable
91	pretty good, cool, and there are play facilities
92	good, clean, comfortable, cool but lacking manicured
93	Suitable for relaxing and many food sellers around the park
94	suitable for playing anal, there are facilities to play but not maintained
95	clean and nice
96	good and comfortable
97	less clean
98	cool and comfortable
99	cool and comfortable
100	comfortable

Table A2.2 Survey Data Opinion of Centrum Music Park (translate from Indonesian language)

No	Opinion
1	there are a number of superhero statues, there are children's playgrounds and quite cool the
2	park is pretty good, cool, comfortable but the superhero statues have started to break the
3	garden is good for playing children because there are facilities for children to play a
4	nice place to relax and lots of trees
5	nice garden, there are statue superhero suitable for children
6	suitable for kids, but a lot of junk
7	comfortable place for rest, cool and lots of trees
8	garden is suitable for children's play
9	garden is passable clean, comfortable and cool
10	garden is unique, there are statues of superheroes, but there are decaying
11	place comfortable, pretty clean and suitable for children

12	a comfortable place for children to play
13	Comfortable and cool
14	recommended for playing children because there are many children's playgrounds and superhero statues
15	Clean, comfortable but dear Children playgrounds often ride by adults
16	The park is quite comfortable and cool but unfortunately it's a bit shabby The
17	park is pretty good and unique, cool and lots of trees
18	Grounds were nice, comfortable and there is a playground of children
19	Recommended place for take the kids to play as many rides child's play, then there is a statue superhero
20	Outdoor park suitable children's playground, facilities child's play there though like ridden adults
21	Suitable for child's play ren and families, airy and comfortable
22	garden is poorly maintained there was some garbage collection, started in the broken chair
23	Pretty clean, comfortable lots of hanging
24	Suitable for children to play, and lots of trees cozy,
25	cool comfortable and quiet clean
26	Less manicured some damaged facilities ranging
27	Grounds less well maintained, the seats are broken and the statues begin to break down
28	Park facilities are quite complete, cool and lots of shady trees
29	Free suitable for children because many rides play children The
30	place is cool, there are children's playgrounds and superhero sculptures but poorly maintained
31	Not maintained many facilities are starting to break down
32	Suitable for hanging out, comfortable, pretty clean and cool
33	Park good for playing children, clean, comfortable and cool
34	Quite spacious, comfortable for children playing and lots of snacks The
35	garden is quite spacious, beautiful, clean and lots of trees
36	Comfortable, calm and many are selling The
37	garden is comfortable, pretty clean, cool and suitable for ngcool
38	Poorly maintained and facilities begin to break down The
39	place is good for playing children and the air is cool
40	Pretty clean, comfortable and cool The
41	park is nice, unique, comfortable and lots of children's playgrounds The
42	place is suitable for children even though there are some rides starting to break
43	Pretty clean, shady trees
44	Places recreation that is suitable for children and playground but is poorly maintained
45	Good, comfortable, cool but poorly maintained
46	Less well maintained The
47	garden is unique because of superhero statues The
48	place is comfortable and cool for hanging out and the air is cool
49	Cool and comfortable
50	Good, cool and comfortable
51	Pretty good and good The
52	air is fresh and comfortable but not maintained The
53	place is pretty good, cool and interesting
54	Good location easy to reach
55	There is free Wi-Fi s
56	Convenient no toilets are also
57	favorite children because many statues of superheroes and playing facilities
58	Good, passable there is a rest area
59	less well-maintained
60	place to relax many trees it was cool
61	Good many facilities children's playground suitable for children
62	Cool, let alone position is the middle of the city and free Wi -Fi
63	Cheap tourist park Meriah. Suitable for children to play but not well maintained The
64	garden is comfortable, pretty clean And many rides play children but less spacious The
65	garden is nice, comfortable And there are many trees and there is a place to play children
66	Pretty good and comfortable There is a place to play children but less well-maintained

Table A2.3 Survey Data Opinion of Photo Park (translate from Indonesian language)

No	Opinion
1	cool
2	nice and comfortable
3	clean and comfortable
4	clean and comfortable
5	very comfortable to hang out
6	pretty beautiful
7	comfortable and cool
8	less good
9	enough to
10	be
11	facilitated for young children
12	suitable for hanging out with friends
13	nice and suitable for hanging out
14	comfortably and nice
15	pretty good
16	comfortable
17	clean
18	comfortable and cool
19	enough comfortable, cool damn
20	comfortable, cool, clean
21	clean, comfortable
22	clean, comfortable and cool
23	less well-maintained and less comfortable
24	comfortable
25	is good enough good
26	, neat but there are some spots there are trash
27	beautiful and clean
28	comfortable, shady trees
29	not good
30	pretty good but the cleanliness is poorly maintained
31	less well maintained, cool and comfortable
32	nice and well-maintained
33	pretty clean
34	good
35	there is free Wi-Fi, cool and beautiful
36	cool, and shady
37	lush, clean and comfortable
38	clean, cool, comfortable
39	cool lots of
40	cool trees lots of trees
41	good
42	cleanliness is poorly maintained
43	nice and
44	fresh
45	pretty good
46	enough good
47	enough and nice
48	comfortable, shady and cool
49	comfortable, cool and cool
50	Cool shade. there is a children's playground but there are no toilets
51	comfortable and nice place, good for hanging out a
52	comfortable place and good for hanging out even though the seats are not too much The

53	place is nice, comfortable and cool
54	comfortable,
55	nice and nice nice and cozy but not maintained the
56	place is comfortable, quite clean and there is a children's playground
57	is not maintained
58	the concept of the garden nice and charming, the place is quite spacious, the air is cool
59	comfortable enough to relax
60	the place comfortable, cool, there are game
61	garden is comfortable and nice to play children unfortunately there is no public toilets
62	where good and comfortable the atmosphere is cool and shady the
63	place is comfortable and cool for jogging, there is a children's playground but there is no public toilet
64	comfortable for relaxing and hanging out because the place is quite shady and cool but no toilet the
65	place is nice and attractive, comfortable, cool and the
66	garden is pretty good, comfortable, shady, cool there is a playground, the
67	garden is comfortable, shady and beautiful, quite spacious and there are playground
68	comfortable place for resting many shady trees so cool and shady the
69	Garden is comfortable to just hang out. the atmosphere is calm and cool
70	suitable to invite to play in this place because there is a playground
71	nice park, comfortable, and quite spacious there is a playground
72	quite comfortable and interesting but less well maintained
73	quite comfortable, cool and shady
74	comfortable shade and beautiful
75	atmosphere of the city park is quite extensive and beautiful trees but not well maintained are
76	Quite comfortable, calm, and cool. lots of shady trees and there is a playground
77	where it is shady, cool, there is a playground for children
78	Comfortable and spacious. many trees are
79	quite spacious and comfortable, there are playgrounds for children that
80	quite comfortable feel cool and cool, the arrangement is pretty good but the seating is limited to
81	comfortable, neatly arranged, but many broken ornaments are
82	comfortable for hanging out, cool and cool
83	Comfortable and attractive. the atmosphere is cool and shady The
84	park is quite nice and attractive, the atmosphere is cool and shady
85	comfortable, calm and many are selling but the seats are a bit
86	Comfortable and cool. there is a playground
87	park that is poorly maintained
88	comfortable, cool, shady comfortable atmosphere
89	Comfortable and pretty clean the
90	park is quite spacious and there is a playground, cool and cool
91	good for cool, cool and cool
92	place is good and suitable for sports, quite spacious place, cool and cool
93	place interesting lots of selling, free parking
94	Quite comfortable, attractive and shady but not maintained
95	comfortably to relax is
96	quite comfortable, cool, cool, there is a playground The
97	place is comfortable for relaxing and learning
98	Open public spaces are quite interesting and free children's playground is
99	poorly maintained, comfortable and interesting The
100	garden is quite spacious and attractive, neatly arranged and has several shady trees

Table A2.4 Survey Data Opinion of Gesit Park (translate from Indonesian language)

No	Opinion
1	Not bad there is shade in the hot sun
2	comfortable, cool,
3	quite comfortable, but lots of scribble,
4	pretty cool but not spacious,
5	Good, but many facilities that do not work.
6	Less spacious,
7	minimal facilities
8	Cool, comfortable. Pretty clean,
9	pretty good, comfortable but not maintained
10	quite comfortable
11	, comfortable, cool
12	free enough
13	to take shelter
14	just know if there is a
15	nice garden the park is unique
16	cool
17	suitable for open spaces
18	cool, comfortable but not spacious
19	good, cool, cool, comfortable
20	Less spacious but decent comfortable
21	nice cool
22	pretty cool, cool and comfortable
23	pretty good, but less maintained
24	pretty cool, cool and comfortable
25	cool, cool, comfortable the
26	air is fresh, comfortable and beautiful the
27	air is fresh, comfortable and beautiful
28	clean and comfortable
29	beautiful and beautiful
30	calm atmosphere
31	comfortable to hang out
32	no maintained but still cool and
33	fit for the rest
34	cool and unique
35	unique and a nice
36	shady, comfortable and cool
37	nice and unique
38	place to hang driver online
39	quite clean and plenty of seating
40	passable for the rest
41	of sports venues and cozy
42	comfortable to just sit and relax in
43	the park for free in Bandung
44	cool and many chairs are
45	clean, beautiful and cool
46	quite comfortable
47	suitable for sitting in
48	a shady garden, even though there are a lot of seating
49	good to relax
50	nice and cool
51	cool and unique

52	place to relax
53	shady, cool and lots of seating
54	comfortable, lots of seating to relax and rest and shade
55	quite good and comfortable but the cleanliness is not maintained
56	good and unique but less well-maintained
57	suitable for relaxing the
58	atmosphere is comfortable, and unique
59	comfortable to relax too shady and cool
60	less clean and there were a few streaks
61	poorly maintained
62	though not extensive but the place is quite comfortable and attractive
63	garden is not well maintained and not clean
64	not too spacious but the atmosphere is comfortable and cool
65	pretty ho to relax although less widespread
66	passable to relax, but the seats a lot of graffiti
67	is not maintained
68	cool, cool and shady but less well maintained
69	comfortable, quiet, not too clean
70	nice, comfortable, quite beautiful and cool
71	comfortable and suitable to rest, the atmosphere cool and airy
72	less manicured
73	quite attractive and comfortable no place selfie above tree
74	comfortable to relax and chat, cool and cool pi locked public toilets
75	comfortable to relax
76	less well maintained even though it is quite good and comfortable the
77	garden is not so spacious but comfortable
78	nice and cozy
79	comfortable and shady
80	comfortable, cool, calm
81	not so spacious but comfortable enough and cool
82	quite clean, comfortable, cool and calm cool
83	enough comfortable and clean
84	very comfortable to relax and unwind, the atmosphere is cool and cool It is
85	neat, cool, cool and many trees are
86	comfortable, cool, cool and pretty clean
87	comfortable enough, the seating is unique and lots of trees
88	nice suitable for resting

Table A2.5 Survey Data Opinion of Fitness Park (translate from Indonesian language)

No	Opinion
1	Less manicured lot of trash scattered
2	less extensive
3	Jogging walk is not good, a lot of garbage
4	passable cool, but is less convenient because a lot of rubbish
5	means of fitness it starts to break down, jogging walk it starts to break down
6	a lot of garbage
7	Nice and cool
8	nice
9	enough
10	good there is a free park in downtown
11	Shady , somewhat dirty
12	lots of rubbish
13	Grounds were not well maintained, lots of litter
14	good, cool

15	garden is not maintained
16	passable cool
17	dear garden unmaintained
18	means of exercise are broken
19	Grounds were rather dirty and poorly maintained
20	shady
21	okay
22	pretty good
23	nice
24	passable neat
25	nice
26	pretty good
27	about the seat
28	less seats
29	The garden is good, there are gym facilities The
30	park is spacious, nice, shady suitable for breaks
31	less neat
32	clean comfortable and cool The
33	garden is nice
34	Shady, nice and clean
35	shady, clean and nice The
36	place is good, suitable for exercising in this garden The garden is
37	not well maintained many facilities broken
38	pretty good and comfortable, suitable for exercise here
39	Quite comfortable there facilities for fitness and there is a fairly wide field.
40	pretty good and comfortable to play and exercise the
41	place is pretty good to relax
42	it's good, cool and comfortable just the lack of
43	good enough, cool, calm and comfortable the
44	park is pretty good and comfortable but many online drivers hang out
45	pretty much to relax especially when exercising but dear unkempt
46	garden is poorly maintained, a lot of rubbish is strewn
47	pretty good for hanging out, sightseeing and sports because there is a free fitness facility the
48	place is good, still cool, pretty comfortable the
49	park is nice, comfortable and cool, the grounds are not maintained
50	quite comfortable for exercise and hanging out
51	pretty good
52	pretty comfortable, shady, cool but the cleanliness is not
53	Quite comfortable, cool, a lot of shade that sells.
54	Suitable for exercising and relaxing
55	moderately to relax, the fresh air of the
56	garden is not maintained especially the cleanliness is
57	pretty cool, comfortable and cool, and there are extensive places for jogging and fitness
58	Cool and comfortable to hang out, many selling
59	Quite comfortable to hang out and shade many trees.
60	good and calm there is a fitness tool
61	garden so it is used to hang out online motorbike driver
62	suitable for exercise there are free fitness facilities
63	Suitable for exercise, and fitness
64	interesting because there are fitness equipment, cool and cool
65	suitable for sports and fitness,
66	cool for hanging out and chatting
67	pretty good for relaxing
68	pretty comfortable, cool but poorly maintained The

69	garden is pretty good, cool, cool lots of snacks
70	suitable for sports
71	unique with free fitness equipment in the park but less well-maintained
72	suitable for sports and the field is wide enough
73	to comfortably rest and hang out
74	suitable for places exercise there are fitness equipment, cool and cool,
75	poorly maintained, facility many are damaged
76	comfortable and suitable for hanging out and exercising
77	suitable for exercise, and free fitness is
78	good, but muddy if the rain is
79	suitable for exercise there is a free fitness equipment
80	rather comfortable cool and cool enough
81	for exercise and fitness even though there are some broken tools
82	Suitable to exercise there is a place for fitness and shady
83	garden is cool, airy, lots of trees
84	suitable for exercising no fitness equipment
85	is nice, lots of trees and there is a fitness equipment
86	where appropriate to exercise lightly but muddy if it rains
87	Pretty good, comfortable and cool
88	poorly maintained
89	pretty good for exercising
90	pretty good, cool and suitable for exercise
91	comfortable to hang out, cool
92	pretty good, and shady
93	pretty for a place to exercise, but lacking in cleanliness the cleanliness is
94	quite good, but less well maintained
95	quite a lot of trees
96	cool and pretty comfortable although less well maintained
97	pretty good, cool but lacking well-maintained,
98	Pretty comfortable, cool and cool. but it is less well-maintained
99	For discussion and chat.
100	Good enough and strategic location

Table A2.6 Survey Data Opinion of Jomblo Park (translate from Indonesian language)

No	Opinion
1	good, quiet
2	good, noisy
3	should this park be used properly
4	less well maintained but the concept is good
5	cool, many benches
6	are uncomfortable because of noise
7	less interested
8	in good facilities
9	many people going out, not according to names
10	unique
11	good
12	good, unique, quiet
13	facilities not clear just for shelter
14	creative, unique, quiet
15	pretty
16	good for shelter
17	quiet
18	quite
19	dusty, noisy

20	difficult road access
21	dirty
22	dusty
23	nice, neat
24	pretty can cool
25	shade nice
26	nice and neat
27	pretty decent free facilities for skateboards
28	nice and neat
29	less comfortable,
30	deserted
31	dusty, uncomfortable
32	nice, neat is
33	often used as a place of rest people
34	do not know the purpose of the park for what is
35	quite awesome, it seems dirty a
36	lot of singers
37	good
38	now the name changes because singles seem negative
39	quite comfortable
40	single garden but many are dating
41	smoothly, less comfortable
42	not for dating but for singles
43	free public facilities
44	Relaxing alone is
45	not appropriate for a garden that is
46	quite
47	lonely, you mayan
48	passable
49	passable
50	suitable if you want to own
51	good, could be to take shelter
52	nice concept
53	suitable to unwind
54	is not as cool as in google maps
55	usual wrote
56	quite unique, poorly-maintained, plasticity rundown
57	unique, noisy
58	cool, unique, interesting, lots of graffiti
59	nice, cool, cool, comfortable,
60	poorly maintained, lots of street singers and
61	cool, cool, free Wi-Fi, noisy
62	young people, lots of vacations hanging out, close to skate parks and movie parks, many selling
63	pretty comfortable, the concept of young people, lots of scrawls for
64	good hanging out , lots of graffiti, noisy
65	good and unique
66	good for hanging out, unique, cool, lots of homeless
67	comfortable but not well maintained
68	clean, comfortable, cool, noisy
69	unique concept and cool
70	cool, nice, not maintained much graffiti
71	untreated
72	untreated
73	untreated, many facilities broken, lots of streaks

74	cool, unique, cool, lot vandalism
75	of good concept, unkempt, lots of neglected graffiti
76	, lots of scribbles, some broken facilities
77	good, cool, interesting concept, noisy, cool
78	pretty clean, cool, good
79	cool, good, unique, cool, not maintained
80	not as good as before it was
81	pretty comfortable, clean
82	not maintained
83	quiet, less maintained
84	comfortable, unique, noisy

Table A2.7 Survey Data Opinion of Film Park (translate from Indonesian language)

No	Opinion
1	Suitable for hanging out with friends and family. the synthetic grass is pretty good
2	Place is clean and neat. the synthetic grass is still good
3	Shady, comfortable but a little
4	cool, comfortable, the synthetic grass is still good The
5	place is good but unfortunately many online drivers are waiting for the passengers to be
6	comfortable and cool
7	The synthetic grass is still good, suitable for gathering with friends
8	for free entertainment, comfortable and clean
9	comfortable and suitable for hanging out
10	comfortable and clean but rather noisy
11	nice and unique
12	Suitable for working on tasks with friends
13	shady, comfortable, nice synthetic grass The
14	garden is nice and comfortable
15	Convenient to gather, there is free Wi-Fi
16	Clean and comfortable
17	quite comfortable and suitable for place
18	, clean
19	enough to be comfortable for discussion and doing tasks
20	comfortable enough to relax
21	quite comfortably and there is free Wi-Fi, cool
22	comfortable gathering .This park is convenient for gathering with friends and there is a free Wi-Fi
23	decent and family recreation
24	nice, clean
25	nice place cool
26	enough comfortable, especially the synthetic grass is still good and there is a nice mosque
27	, there is entertainment Large screen
28	Good enough s and well maintained, comfortable for get-together is
29	pretty good, suitable to bring the child but must be with supervision the
30	good
31	place is easy to reach
32	comfortable and cool, good synthetic grass is
33	good suitable for free
34	cool comfortable and cool
35	clean and comfortable, synthetic grass is still good
36	comfortable and clean
37	pretty good and neat but sometimes a bit noisy The
38	design of the garden is interesting and the atmosphere is comfortable and cool
39	so it's a bit shabby the
40	Place is pretty comfortable, nice and cool. but access to the park is a bit shabby

41	Interesting but rather noisy
42	Suitable for children and quite spacious
43	comfortable place, nice, synthetic grass is still good
44	comfortable, good
45	Suitable for children because there is synthetic grass. nice shade and cool
46	the concept is cool there is synthetic grass, pretty clean
47	good and attractive, pretty clean, calm and cool
48	Comfortable to gather with family and friends, quite cool and cool, a bit noisy
49	pretty comfortable for hanging out
50	Good and suitable for gathering with friends and Good family, shade and cool
51	suitable place to gather, cool and calm
52	Comfortable, cool and cool
53	comfortable, cool and cool
54	place is nice and clean, synthetic grass is still good
55	comfortable, cool, cool there is synthetic grass and still good
56	for hanging out and gathering with friends
57	comfortable to hang out and pretty clean
58	nice and unique because there is synthetic grass
59	, cool and cool suitable for children playing
60	The concept of the garden is attractive, neat, synthetic grass is still good, cool and
61	comfortable to gather with friends and family there is synthetic grass to be safe for children play
62	suitable to invite children to play and family
63	COMFORTABLE, DEAD, COOL AND just right for gathering
64	Unique and interesting, calm and n cool
65	pretty comfortable, quite clean, cool and shady
66	place is great for hanging out, cool and shade
67	Nice, perfect for inviting children and families. there is synthetic grass so it is safe to play
68	pretty comfortable and neat and cool and cool
69	suitable for playing children because there is a synthetic grass
70	comfortable to hang out
71	comfortably, cool and cool, unique because there is synthetic grass and a large monitor is
72	Nice and comfortable to hang out and free.
73	pretty clean, cool and cool there is synthetic grass
74	suitable for children to play, comfortable, calm, synthetic grass is still good
75	clean and comfortable place
76	For discussion and work assignments. And cool
77	comfortable place, suitable for, discussion and clean The
78	gathering garden is comfortable for gatherings, the synthetic grass is still good
79	Comfortable, calm and cool. grass synthetic pretty good
80	comfortable cool shady
81	comfortable to play, lawn synthetic still nice
82	comfortable place, shady and cool
83	comfortable place to gather with family and friends
84	where better to watch together
85	a comfortable, cool, shady and grass synthetic still nice
86	comfortable, quite spacious, shady and cool but the vehicle noise is
87	Rather wide, cool and cool. the synthetic grass is still good,
88	suitable for children to play, the synthetic grass is still good so the child is comfortable playing
89	comfortably and quietly, quite broad but the screen rarely operates
90	very cool, comfortable even though the vehicle noise is
91	quite comfortable and quiet but the vehicle noise is
92	Quite comfortable, and cool. interesting and unique,
93	Quite broad, the concept of an attractive place is suitable for just hanging out and discussion.
94	Convenient for hanging out, discussion and just arrest

No	
95	comfortable, cool, clean enough but rather noisy vehicle sounds
96	comfortable, cool and clean enough suitable for gathering and resting
97	Open space convenient public to hang out with family or friends, quite spacious and clean. but rarely screenings The
98	place is quite comfortable, shady, cool and clean
99	suitable for young, comfortable, cool and
100	nice and spacious enough, suitable for gathering with friends and family

Table A2.8 Survey Data Opinion of Lansia Park (translate from Indonesian language)

No	Opinion
1	crowded, clean, neat,
2	less clean
3	comfortable, less clean, cool
4	cool, less clean, as
5	comfortable, fresh
6	as Bandung residents keep away the stress of
7	comfort
8	less Wi-Fi, broken charger facilities
9	Wi-Fi less
10	cool, lots of garbage
11	good but lots of garbage
12	unique, nice, beautiful
13	nice
14	beautiful, dirty and smell
15	cool, beautiful, a little rubbish
16	beautiful, clean, comfortable
17	cool, clean
18	beautiful, comfortable
19	comfortable, beautiful
20	beautiful, comfortable
21	comfortable
22	Clean
23	cool, water channels are not good, comfortable
24	nice, comfortable
25	comfortable, cool
26	cool, nice
27	good, neat, lots of rubbish
28	-
29	good, clean, neat
30	nice, neat, cool, safe, comfortable,
31	cool
32	cool, comfortable
33	cool, nice
34	clean and comfortable
35	beautiful
36	comfortable
37	comfortable, shady
38	less comfortable
39	less comfortable
40	cool, comfortable, beautiful
41	cool, comfortable
42	comfortable neat , not clean
43	comfortable, cool
44	cool, beautiful

45	comfortable,
46	comfortable, clean, cool
47	comfortable, quiet
48	comfortable, quiet, cool
49	dirty, less
50	clean, comfortable
51	cool, cool
52	cool, cool
53	cool, beautiful
54	cool
55	cool, cool
56	nice facilities
57	, comfortable , nice
58	good, comfortable, clean h
59	less well maintained
60	clean
61	uncomfortable
62	nice, the facilities are lacking
63	new this time around to this park
64	well
65	cool, cool, clean
66	lots of plants, cool
67	cool, comfortable,
68	cool, comfortable,
69	cozy, beautiful, cool
70	cool, crowded
71	comfortably
72	cool, comfortable, cool,
73	comfortable, clean
74	nice, comfortable
75	clean, comfortable, cool
76	comfortable, cool
77	cool
78	, clean, cool
79	, cool, cool, comfortable
80	clean, comfortable, good
81	comfortable
82	nice, comfortable, cool
83	cool, nice
84	cool, tasty
85	comfortable
86	comfortable, clean, cool
87	comfortable, cool
88	comfortable ,cool
89	nice, cool
90	cool, comfortable
91	cool, comfortable
92	comfortable
93	comfortable, clean
94	attractive, clean, cool
95	comfortable
96	comfortable, cool,
97	nice, pool and river must be repaired
98	many plants, no garbage scattered

No	Opinion
99	cool, comfortable, clean
100	need repairs

Table A2.9 Survey Data Opinion of Pet Park (translate from Indonesian language)

No	Opinion
1	The park is less clean and well-maintained, the tables and chairs are broken. The
2	Place is cool for hanging out and relaxing with friends while carrying pets. The
3	Place is suitable for gathering with the community of animal lovers.
4	the park is quite spacious and comfortable
5	The place is just right to carry pets, there is an arena for playing animals
6	gathering place for communities of cat and dog lovers The
7	park is increasingly poorly maintained and many facilities are damaged The
8	place is convenient for hanging out and coffee but many facilities are damaged
9	Fun places to bring pets and hang out but some damaged facilities The
10	park is not maintained, lacks grass, dirty and dirty
11	A good place to bring pets, there is a playground for animals The
12	place is quite large and there are several arenas for playing animals, but it is poorly maintained, dirty and the smell of the
13	park is poorly maintained, there are some spots that have animal manure The
14	place is cool for hanging out
15	pretty comfortable, cool and beautiful The
16	place is cool, perfect for carrying pets while jogging
17	quite calm and comfortable
18	Many community animals gather, but the means to play animals are damaged
19	A comfortable place to bring pets, but many damaged facilities
20	Too bad the park is not maintained, many facilities are damaged The
21	Place is quite beautiful and there are many shade trees. Not too many vehicles pass. Sometimes there are many animal lovers communities. The
22	Place is quite comfortable and beautiful, many shady trees.
23	The place is convenient for hanging out and there are those who sell delicious coffee around the park.
24	One hangout and cool hangout. There is a place to train animals, but the garden facilities are poorly maintained The
25	place is quite large and there is a place to train animals, cool and cool because there are many trees
26	Not bad for hanging out there are free parking lots of facilities that are damaged The
27	garden is cozy and shady, many trees are
28	comfortable, calm and beautiful
29	comfortable and airy
30	garden so rundown and not well arranged
31	comfortable to hang out and many pets unfortunately poorly-maintained
32	place is convenient to take pets but unfortunately her so poorly maintained and many facilities have broken
33	the concept of the garden is very interesting but many facilities are damaged
34	place is nice and comfortable to hang out and gather with friends
35	Convenient and good for carrying pets playing pet
36	playgrounds, many trees with
37	many animal facilities gathered with friends cool and calm there are facilities for playing animals The
38	park is quite comfortable to hang out and cool but lots of broken facilities
39	suitable place bring a pet and a gathering with friends, a comfortable place and lots of trees The
40	place is cool for carrying pets The
41	Place to gather pet lovers is there facilities for playing animals.
42	The place is good, quite spacious and lots of pet play facilities but many facilities are damaged and not maintained
43	comfortably and shade a lot of trees but unfortunately many facilities are damaged The
44	park is poorly maintained, many facilities are dirty and damaged The

No	
45	garden is poorly maintained, many facilities are dirty and damaged
46	Grounds were comfortable many trees shade of the atmosphere is cool and shady but less facilities maintained
47	quite comfortable and shady
48	place is very strategic but many facilities are less well maintained
49	garden is the recommended for collector and have a chat and take animals
50	place is cool and comfortable for refreshing and lots of pets and a lot of places to play animals The
51	park is quite extensive and many shady trees are
52	not maintained and many facilities are
53	dirty and uncomfortable lacking
54	Many communities of animal lovers gathered in this park are
55	pretty cool and comfortable because there are many trees but no toilets for
56	comfortable hanging out
57	Pretty spacious, spacious and comfortable
58	Enough and comfortable. Many facilities for playing animals but many facilities are damaged
59	The concept of the park is nice, shade and lots of trees but cleanliness is not
60	enough Comfortable, shady, but the smell in some places and less well maintained
61	comfortable and spacious seating and tables have been damaged
62	cool, cool, tolerable comfortable and suitable pet playground but no toilet
63	suitable to carry pets because there are animals playing facilities are
64	pretty beautiful and cool there are rides playing pets
65	good and suitable for carrying pets
66	Strategic and many facilities for animals
67	suitable bring a pet
68	good carry a pet walk -
69	Many animal lovers are only on holidays.
70	Clean and spacious
71	suitable for carrying pets, there is a
72	good place for animal lovers but it is not clean
73	enough, lots of trees but a little seedy, the seats are damaged

Table A2.10 Survey Data Opinion of Inclusion Park (translate from Indonesian language)

No	Opinion
1	pretty clean
2	not good, lots of garbage, toilet less awake, or can't be used
3	comfortable, clean
4	nice good
5	enough for good sports
6	spacious
7	very useful
8	nice
9	improvement atmosphere, change facilities
10	very good
11	very good
12	very good
13	very good
14	cool, clean
15	nice
16	good
17	pretty clean
18	nice
19	visitors do not realize dispose of waste in place
20	a cool, airy, comfortable, clean,
21	clean, comfortable, cool

22	comfortable
23	cozy, clean, neat,
24	cool, clean,
25	nice, comfortable,
26	nice, neat, clean, cool,
27	cool, cool,
28	nice
29	nice, cool,
30	comfortable,
31	nice clean
32	nice, comfortable
33	good, clean, comfortable
34	comfortable, clean
35	nice, cool
36	cool, comfortable, cool
37	clean, comfortable, cool
38	cool, comfortable, clean
39	comfortable, clean
40	nice, cool, cool
41	less clean and comfortable
42	very good
43	very good
44	pretty good
45	Beautiful
46	comfortable, cool
47	beautiful
48	nice, neat
49	clean
50	comfortable, safe
51	nice
52	comfortable, clean
53	cool, nice, neat
54	good, comfortable, clean
55	cool
56	clean, cool, comfortable
57	nice
58	fresh, comfortable, clean
59	suitable for hang out for hanging
60	nice out
61	comfortable, clean and
62	cool k, comfortable, clean
63	nice, cool
64	clean, comfortable
65	pretty good
66	clean, comfortable
67	good, clean, comfortable
68	pretty clean
69	good, clean, comfortable
70	comfortable, clean
71	neat, clean
72	clean, comfortable
73	comfortable, cool, clean
74	good, clean, comfortable
75	nice, comfortable , cool, clean, clean

76	comfortable, spacious
77	cool
78	cool
79	nice
80	Nice, cool
81	nice, cool, neat
82	clean
83	cool, nice
84	cool
85	garbage piled
86	beautiful, cool
87	facilities complete disability
88	Neat
89	good
90	nice, beautiful
91	less spacious, clean
92	cool, nice
93	cool
94	quiet
95	cool
96	open space free public
97	comfortable, cool
98	clean, well maintained
99	clean
100	facilities added and visitors added

Acknowledgement