

MBDESIGN - DESIGN, INNOVATION & TECHNOLOGY - UPC

Marco Polo

“Enhancing Travel Recommendations:

Romina Frías Velasco
2022 - 2023

INDEX

Introduction
Research Questions
Hypothesis
Methodology

CONTEXTUAL FRAMEWORK

1. A Digital World

- 1.1. The Digital Age
- 1.2. Digital Culture = Digital Society
- 1.3. Digital Identity
- 1.4. Digitalization of Services

2. Digital Services and Tourism

- 2.1. Modern day traveling
- 2.2. Tourism 4.0
- 2.3. Emerging Tourism Trends

TECHNOLOGICAL FRAMEWORK

3. High Tech

- 3.1. Artificial Intelligence
 - 3.1.1. Machine Learning, Neural Networks & Deep Learning
 - 3.1.2. When Machines Speak Human
 - 3.1.3. Garbage in, garbage Out
 - 3.1.4. Aprehension & Enthusiam

CONCEPTUAL APPROACH

4. Context of the Project

- 4.1. Online Presence and Privacy
 - 4.1.1. Digital Footprint
 - 4.1.2. Privacy Paradox
- 4.2. Motivations for Travel
 - 4.2.1. Hierarchy of Needs
 - 4.2.2. Push & Pull Factors
 - 4.2.3. Travel Career Theory
 - 4.2.4. Means-End Theory
- 4.3. Travel Decision Making
 - 4.3.1. Social Proof
 - 4.3.2. User-Generated Content
 - 4.3.3. Electronic Word-of-Mouth
- 4.4. The Role of Personalization
 - 4.4.1. The Paradox of Choice
 - 4.4.2. The Cocktail Party Effect
 - 4.4.3. Personalization as a Solution

5. Case studies

- 5.1. Travel GPT
- 5.2. iplan.Ai
- 5.3. TripNotes
- 5.4. The Trip Boutique
- 5.5. Review of the examples

IMPLEMENTATION

6. Inspiration

7. First steps

- 7.1. Empathy
- 7.2. Definition

8. The proposal

- 8.1. Ideation
- 8.2. Prototyping
- 8.3. Testing

CONCLUSIONS

9. Final comments

10. Bibliography

11. Annex

Acknowledgements

I will be forever grateful to all those who have been a part of this journey.

My professors, especially Enric and Josep María, whose invaluable guidance, expertise, and continuous support have shaped the work I've done through this year

My fellow classmates, with whom sharing the past months has been an immense pleasure.

My family, partner and friends whose unconditional love, encouragement, and patience have pushed me through this year abroad.

Thank you for believing in me.

Tutored by · Enric Trullols Farreny
Typography · Freight Big Pro & Proxima Nova LT
MBDesign · Design, Innovation & Technology
Year 2022 · 2023



Abstract

Keywords

Digital footprint, tourism, choice paradox, artificial intelligence, machine learning.

English

This thesis aims to examine the way the digital footprint users leave behind can be utilized to optimize the personalization of tourism services, through the use of artificial intelligence.

The paper proposes that the surge of artificial intelligence has opened a world of opportunities to develop new tools to improve the digital travel experience. The approach is based on the idea that digital footprints are unique and particular to each individual and this valuable data can result in smarter and unerring travel suggestions.

Behavioral attitudes of the user, such as the influence of user-generated content in social media and e-word of mouth in the

travel planning process, are considered, as well as the implications of this data trail in the optimization of customized travel services.

This model describes the relationship between artificial intelligence and hyper-personalization of services. As it is a growing trend that is disrupting our current reality, the presented thesis develops a tailor-made traveling application that, with permission of the user, leverages the data collected from personal social media to build a specific travel plan based on each user's preferences.

Abstract

Palabras clave

Huella digital, turismo, paradoja de elección, inteligencia artificial, machine learning.

Spanish

Esta tesis tiene como objetivo examinar la manera en que la huella digital que dejan los usuarios en internet puede utilizarse para optimizar la personalización de los servicios turísticos, mediante el uso de inteligencia artificial. El documento propone que el auge de la inteligencia artificial ha abierto un mundo de oportunidades para desarrollar nuevas herramientas para mejorar la experiencia de viaje digital. El enfoque se basa en la idea de que las huellas digitales son únicas y particulares de cada individuo y estos valiosos datos pueden dar lugar a sugerencias de viaje más inteligentes y certeras. Se consideran las actitudes de comportamiento del usuario, como la influencia del contenido generado por el usuario en las

redes sociales y el boca a boca electrónico en el proceso de planificación del viaje, así como las implicaciones de este rastro de datos en la optimización de los servicios de viaje personalizados. Este modelo describe la relación entre la inteligencia artificial y la hiperpersonalización de servicios. Como es una tendencia creciente que está alterando nuestra realidad actual, la tesis presentada desarrolla una aplicación de viajes a medida que, con el permiso del usuario, aprovecha los datos recopilados de las redes sociales personales para construir un plan de viaje específico basado en las preferencias individuales.

Introduction

With the growing popularity of artificial intelligent chatbots such as ChatGPT, one cannot help but wonder about the great potential they bring. Between hopes and fears, a new reality is coming in which automation and digitalization are the new normal.

We now are more aware of the use of artificial intelligence (AI), as it is no longer behind the scenes for product recommendations, not as our home assistant to play songs on command, not as bots that respond automatically. We now can use it to create songs, to write essays, to plan workouts and meals, to sort through pictures, to save ourselves precious time.

As AI has never been as relevant as it is in this point is history, so is tourism after the global pandemic. People are still revenge-traveling, making up for the time missed in confinement and daring to visit locations never thought of before, especially now that restrictions are fairly relaxed in most countries.

We now look for references through our social media, check reviews before purchase or reservation, trust e-word of mouth and have become content creators ourselves when we share our vacation photos and experiences with our online friends.

Over the last two years, the travel industry has seen high demand of customers for digitalization, as these online services are perceived to make it easier for travelers to access information, book trips, and explore destinations.

As the purchasing power of generations Y and Z, considered “digital natives”, is increasing, the greater the pressure for the digitalization of services.

Today, digitalization is a must for companies that want to stay relevant in the current market, and with the growing trend of AI use, it is only a matter of time before we see hyper-personalization of services that perfectly suit each costumers’ individual demands.

This thesis explores the importance of our individual digital footprint in the digital society we are living in, the way our interactions with people and things online influence our behavior and purchasing habits and the role of AI in personalization by analyzing the sea of data we create every day.

Research Questions

Would people trust a tool that has personal data especially about behavior and preferences, by combining AI with social media, if they perceive the value obtained is worth it?

Can we build a platform that considers multiple factors and variables for custom travel?

Can travel suggestions come from people who have experience instead of companies trying to sell products, can they be based on each individuals’ interests instead of intentional mass-personalization marketing?

Hypothesis

Artificial intelligence (AI) has become increasingly available for daily use over the last few years, in the form of personal assistants, movie platforms' personalized recommendations to self-driving cars and advanced medical diagnosis tools.

AI is changing our everyday lives by managing the data at scale and analyzing it to identify the newest trends, user behavior and preferences, to assist individuals and provide personalized recommendations. But the focus until not long ago was mostly marketing purposes for increased revenue.

With the surge of AI-powered tools such as ChatGPT in the last few months, it is inevitable to wonder about the great potential of this technology for personal organization and leisure purposes.

For this project, we will explore one of the possible future uses of AI, in a user-centered approach, by merging the potentiality of AI with the personal data footprint about personal interests gathered from social media.

The hypothesis posits that through the intelligent analysis of individuals' digital footprints, extraction of insights from user-generated content, and filtering of relevant information, both the integration

of artificial intelligence (AI) with personal data footprints has the potential to revolutionize travel services by offering hyper-personalized travel suggestions.

By reducing decision-making complexity, alleviating the paradox of choice, and providing efficient and enjoyable travel planning, it could be possible to enhance user satisfaction, foster greater engagement, and improve efficiency in travel decision-making processes.

The exploration of theoretical foundations, relevant studies, and examples from the travel industry will shed light on the benefits and challenges associated with integrating AI and hyper-personalization in travel services.

This user-centered approach, combining AI's ability to process data at scale and understand user needs with the wealth of personal interests gathered from social media, could potentially create a seamless and tailored user experience.

Methodology

For the development of this thesis, the design thinking methodology has been chosen. Interaction Design Institute and IDEO define it as a "problem-solving methodology that offers an approach centered around finding solutions." It is a human-centered approach to innovation—anchored in understanding customer's needs, rapid prototyping, and generating creative ideas.

Design thinking is a systemic, intuitive, customer-focused problem-solving approach (McKinsey & Company, 2023), this methodology was chosen because it is seen as ideal for the nature of this project and because it places the needs and preferences of users at the center of the design process, ensuring that the resulting solutions are tailored to their expectations and requirements.

The design methodology will follow a structured approach, incorporating the following key phases: empathy, define, ideate, prototype, and test. Each phase contributes to the iterative and user-centered nature of the design process.

Empathy: During the empathy phase, user research will be conducted to gain deep insights into the preferences, pain points, and motivations of travelers. This will involve methods such as interviews, empathy maps, user journey, allowing for a comprehensive understanding of user needs and aspirations in the context of personalized travel experiences.

Define: The define phase aims to distill and synthesize the findings from the empathy phase to identify key design requirements and problem statements. This phase clarifies the design objectives, goals, and constraints, providing a solid foundation for the subsequent design ideation.

Ideate: This phase involves brainstorming and generating a diverse range of design concepts and ideas.

Prototype: The prototyping phase focuses on transforming selected design concepts into a tangible representation. This involves the creation of low-fidelity prototypes, such as sketches or wireframes, to visually communicate design ideas. Iterative prototyping will enable quick iterations and refinements, incorporating user feedback and ensuring alignment with the identified design requirements. Finally, a high-fidelity prototype, will be developed to simulate the personalized travel experience.

Test: The testing phase involves gathering user feedback on the developed prototypes to evaluate their usability, effectiveness, and overall user experience. This user feedback is instrumental in identifying areas for improvement and refining the design solutions. In the context of this project, time represents a restraint that won't allow for testing; however, it is important to highlight that nowadays, digital products are in a perpetual beta state, constantly testing and elevating the user experience of their services.

THEORETICAL FRAMEWORK



Fig 1. Social Cut, Unsplash

“The Internet is the largest experiment involving anarchy in history. Hundreds of millions of people are, each minute, creating and consuming an untold amount of digital content in an online world that is not truly bound by terrestrial laws. This new capacity for free expression and free movement of information has generated the rich virtual landscape we know today.”

Eric Schmidt & Jared Cohen, The new digital age

1. A Digital World

1.1 The Digital Age

The Digital Age, otherwise known as the Information Age or the Computer Age, is the present era where everything is dependent on the “widespread use of the Internet”. These advancements have transformed the way we live and work, and they have become a part of our everyday lives.

The widespread use of the Internet is fueling one of the most exciting social, cultural, and political disruptions in history, a simple way to illustrate this is that as of June 2022, more than 500 hours of video were uploaded to YouTube every minute (Statista, 2023).

This equates to approximately 30,000 hours of newly uploaded content per hour, with these numbers it is safe to assume that the amount of information available to us in this era is unprecedented. In order to understand the gradual growth of digital technologies, we can divide the Digital Age in three main periods as explained by Vorobiova, 2022:

Pre-Digital: Refers to a time when technologies only served one purpose. Media such as television, newspapers, radio, and magazines were all one-way communication outlets. During this time, shopping was still the usual way to purchase products and services.

Vorobiova illustrates these times using the example of physical phone books, that by now seem like a thing of the past as now that information is all stored on mobile devices.

Mid-Digital: This is the phase we are currently in. As businesses are shifting towards digitalization of services, there is still a part of the population that remains trusting traditional technologies. A simple example is the preference for cable TV instead of subscription-based streaming services. According to the author we are still “lacking continuity”, in the sense that there is still a long way to go in the path towards digitalization.

Post-Digital: She speculates that in this age the digital aspect will become hardly noticeable, just like electricity is for us at the present time. The term smart will be applied to pretty much every object we interact with, digital will just be a “fact of life”. This age will come with new challenges and opportunities.

In the world of smartphones, people now have access to the world’s information at the tip of their fingers. In a way, it’s like they have “insurance against forgetfulness” (Schmidt & Cohen, 2013).

1.2 Digital Culture = Digital Society

In the ever-evolving Digital Era, technological advancements have reshaped the way we live, communicate, and engage with the world around us. Central to this transformation is the emergence of a vibrant Digital Culture, which has fundamentally altered the dynamics of human interaction, self-expression, and knowledge sharing. As mentioned previously, culture and communication are two closely related concepts. Foresta et al., 1995 put special emphasis on two definitions from the Webster dictionary.

The first is that culture is “the integrated pattern of human knowledge, belief, and behavior that depends upon man’s capacity for learning and transmitting knowledge to succeeding generations.” (Merriam-Webster’s Collegiate Dictionary, n.d.) The second concept is that culture refers to “the customary beliefs, social forms, and material traits of a racial, religious, or social group. “The characteristic features of everyday existence (such as diversions or a way of life) shared by people in a place or time”. (Merriam-Webster’s Collegiate Dictionary, n.d.)

For Foresta et al., 1995 the difference between these two concepts is that the first one refers to the transmission of knowledge, while the second relates to the common rules for a community, their behavior, and the relationships they share with one another. (Foresta et al, 1995, as cited in Uzelac & Cvjetičanin. 2008).

They imply that culture is a “collective memory, dependent on communication for its creation, extension, evolution and preservation.”

We can derive from the statements above that culture is strongly related to communication, and as the ways we communicate have changed over the last decades, we can agree that culture itself has changed too. At this point in time, all technologies mediate human experience and have transformed our society.

Digital Culture encompasses the practices, values, behaviors, and forms of expression that have emerged within the context of the Digital Era. It reflects the ways in which technology has influenced and shaped our cultural norms, social interactions, and modes of self-expression. The digital landscape is characterized by the proliferation of online communities, virtual identities, and new modes of communication.

Social media platforms, blogs, forums, and other digital spaces have become avenues for individuals to share ideas, experiences, and creative works, fostering a sense of belonging and collective identity within digital communities. Digital Culture is a dynamic and ever-evolving ecosystem that shapes and is shaped by the users who actively participate in it.

Fig 2. Creative Christians, Unsplash 2020



Building upon the foundation of Digital Culture, the Digital Society represents the broader social, cultural, and economic implications of digital technologies in our lives. It encompasses the transformation of various social structures, institutions, and practices due to the widespread adoption and integration of digital technologies. The Digital Society is characterized by the extensive use of digital devices, online platforms, and networks that facilitate communication, collaboration, and information sharing.

Floridi, 2015 (as cited by Levin et al., 2021) elaborates on the three important “transformations” of the digital society. First is the blurred distinction between real and virtual, with this he implies that web presence has altered people’s notion of reality and it is increasingly difficult to distinguish the difference.

The second is the blurring distinctions between nature, human and artifacts, this relates to the extensive integration of internet of things (IoT) and artificial intelligence in the human domain, almost considered as a “cognification” to our environment.

And finally, the changing direction between scarcity of information to data overload, in a world where knowledge is abundant and easily available, what makes us survive in the sea of information is our capacity to pay attention and discern the false from the fact.

Currently Digital Technologies surround us, they are part of the environment we live in, shaping the society we are part of, as we participate in virtual interactions. “Digitalization has enabled the process of media convergence to take place” (Uzelac & Cvjetičanin. 2008).

These technologies foster an environment of interactivity and participation, where users are not only consumers of information but also creators of content. Today most of us find ourselves navigating through two realities simultaneously, the virtual one and the physical one, and we experience human reality through our mobile devices as most of our human interactions are done through that medium.

1.3 Digital Identity

Digital identity exists within the context of both digital culture and digital society, it is shaped by the cultural norms, values, and behaviors that emerge within digital culture. Individuals craft their identities by adopting and participating in the practices and modes of expression prevalent in digital culture.

Simultaneously, their identity contributes to and influences the evolution of digital culture as individuals express themselves, share content, and engage with others through their Digital Identities, they shape the cultural landscape of the digital realm.

To understand the implications of a digital identity, we must first look at the definitions of identity. In accordance with some sociological literature, there are two elements that constitute an identity, the first is personal and relates to characteristics assigned to individuals at birth, such as name, birthday, fingerprint, and height (Blue et al, 2018). Whereas the second and most related to the digital aspect, is the social identity which pertains to the bibliographical history that individuals gather over a lifetime, this identity describes the social context of a person's life. (Vignoles, 2017, as cited in Blue et al, 2018).

Furthermore, different authors' research (as cited in Papaioannou et al, 2020), propose identity as the way in which people present themselves to others in a digital context. Therefore, a "digital identity" is shaped by users' interactions and com-

The digital world allows the liberty for users to present themselves in different roles, some are content creators, some search for belonging in e-communities, some seek information, and the sum of their behaviors is what shapes users' digital identity. (Fieseler et al. 2014, as cited in Papaioannou et al, 2020).

The most popular channels through which individuals create their digital identities are social networks, on their virtual profiles they communicate, share information, and interact with others. In this sense, digital identity proves to be a strongly social "product" because it also involves users' opinions about the information that is shared (Papaioannou et al, 2020).

Social media encourages users to share as much personal information as they can, in favor of developing a "strong digital identity"; this allows for the collection and storage of large volumes of data. (Zhang et al. 2010, as cited in Papaioannou et al, 2020)

Papainoannu's research leads to the conclusion that personal data disclosure is a crucial aspect of the conception of a digital identity and relates it to involvement, by stating that the higher the engagement, the more popular the profile – digital identity. (Zhao et al. 2008, as cited in Papaioannou et al, 2020). Modern social networks encourage users to share and disclose personal information in order to create a strong digital identity.

1.4 Digitalization of Services

As the digital era has unfolded, digital society has witnessed the remarkable growth of an online community and an increasingly tech-savvy population. The pervasive presence of digital technologies and the widespread adoption of social media platforms have fueled user demand for convenient and personalized experiences in all aspects of their lives.

This shift in user behavior and expectations has prompted businesses across industries to adapt and embrace the digitalization of services.

To meet the evolving needs of the digitally connected population, businesses have recognized the necessity of leveraging digital technologies to transform traditional services or create new ones.

This adaptation is driven by a strategic response to cater to the demands of an expanding online community, ensuring seamless access to services, and delivering enhanced customer experiences.

Digitalization involves utilizing digital technologies, such as APIs, and digitized data to enable, enhance, or transform business processes. It encompasses the integration of new and improved technologies across all aspects of a business, aiming to fundamentally change processes, enhance customer experiences, and create value

Some examples of this are the surge of e-commerce platforms, online shopping and digital marketplaces, which have transformed the retail landscape and reshaped consumer behavior; online entertainment with streaming services that have disrupted traditional media distribution models; online banking and digital wallets which have made financial transactions more accessible, secure, and efficient; and the emergence of ride-hailing and food delivery which provide on-demand solutions, to name a few.



Fig 3. Card Mapr, Unsplash 2020

2. Digital Services and Tourism

2.1 Modern day traveling

In the modern-day, digitalization has transformed the traveling and tourism experience, offering travelers unprecedented convenience, personalization, and connectivity. With the integration of digital technologies into travel services, the way people plan, book, and explore destinations has undergone a significant shift.

From the convenience of online booking platforms and mobile applications to the availability of personalized recommendations and virtual experiences, digitalization has revolutionized every aspect of the travel journey.

Some keyways in which digitalization has shaped and impacted the industry are:

- Access to Information and Planning: Online platforms and travel websites provide comprehensive details, reviews, and recommendations, allowing travelers to make informed decisions and plan their trips with greater confidence. This accessibility to information has increased transparency and enabled travelers to customize their itineraries according to their preferences.

-Seamless Booking and Transactions: Online travel booking platforms and mobile apps have simplified the reservation process, allowing travelers to book flights, accommodations, rental cars, and activities with just a few clicks. Integrated payment systems and secure transactions have enhanced the speed and ease of completing bookings, reducing the reliance on traditional offline methods.

-Personalization and Customization: By leveraging data analytics and algorithms, travel service providers can offer tailored recommendations, suggested itineraries, and targeted offers based on travelers' preferences, previous bookings, and browsing behavior. This personalization enhances the relevance and satisfaction of travel experiences, ensuring that travelers receive recommendations and services that align with their interests and needs.

-Enhanced Travel Experiences: Travelers can access digital travel guides, maps, and real-time updates on their smartphones, making navigation and exploration more convenient. The availability of virtual tours, augmented reality (AR) applications, and immersive experiences has expanded the ways in which travelers can interact with and learn about

“When digital transformation is done right, it’s like a caterpillar turning into a butterfly, but when done wrong, all you have is a really fast caterpillar.”

— George Westerman, MIT Sloan Initiative on the Digital Economy

- Improved Communication and Connectivity:

With the widespread availability of internet access and mobile connectivity, travelers can access travel information on the go, and share their experiences in real-time through social media and online platforms. This connectivity has also facilitated instant communication with service providers, allowing travelers to seek assistance, resolve issues, and receive updates effortlessly.

-Data-Driven Decision Making:

Through data analytics, travel service providers can gain valuable insights into traveler behaviors, preferences, and trends. This data-driven approach enables businesses to make informed decisions, optimize pricing strategies, enhance service offerings, and improve operational efficiency. It also allows for targeted marketing and personalized recommendations, resulting in more effective customer engagement and loyalty.

-Collaboration and Peer Recommendations:

Online platforms and social media networks have become spaces where travelers can share their experiences, provide feedback, and seek advice from fellow travelers. This collaboration and peer recommendations have influenced traveler choices and shaped the reputation of service providers, creating a community-driven approach to travel decision-making.

2.2 Tourism 2.0

In the realm of travel and tourism, two closely related but distinct concepts have emerged in recent years: **digital tourism and smart tourism**.

While these terms are often used interchangeably, they represent different facets of the evolving technological landscape within the industry.

Smart tourism encompasses the utilization of advanced technologies, such as the Internet of Things (IoT), artificial intelligence (AI), and big data analytics, to create intelligent and connected travel experiences. It focuses on seamlessly integrating these technologies to provide travelers with personalized recommendations, real-time updates, smart transportation systems, and other innovative services.

On the other hand, digital tourism refers to the application of digital technologies and online platforms to enhance and transform various aspects of the tourism experience, including destination promotion, travel planning and booking, virtual experiences, and data-driven insights.

While both digital tourism and smart tourism leverage digital technologies, they differ in their scope and emphasis. To gain a deeper understanding of how technology is shaping the future of travel and tourism, further development on the differences between the two concepts in the following .

2.2.1 Smart Tourism

As described by various authors in the research synthesized by Kononova et al., 2020, encompasses several key ideas, it leverages mobile digital connectivity to establish intelligent, meaningful, and sustainable connections between tourists and the destination. It goes beyond being a mere form of consumption and emphasizes deep civic engagement, encouraging tourists to actively interact with the local community and culture.

A crucial aspect of smart tourism is the provision of clean, eco-friendly, ethical, and high-quality services throughout the entire tourism service chain. It aims to minimize negative environmental impacts and promote responsible tourism practices. (United Nations World Tourism Organization-UNWTO, 2020 as cited by Kononova et al., 2020).

To achieve this, Smart Tourism maximizes environmental, cultural, social, and economic values through the integration of information technology (IT), including the Internet of Things (IoT), cloud computing, Geographic Information Systems (GIS), virtual reality, and the mobile Internet (Sjaocjan' K., 2016 as cited by Kononova et al., 2020).

Smart tourism represents the combined model of the evolving tourism industry and innovative technology: it seeks to enhance efficiency, personalization, and convenience for tourists through the integration of these two domains.

This integration results in an individual tourist support system that provides tailored information services to tourists based on their specific needs. (Yu. Li et al., 2017 as cited by Kononova et al., 2020). These can be accessed anytime and anywhere to cater to the individual requirements of tourists. Yu Li et al.'s research (as cited Kononova et al., 2020), indicates that Automation and data-driven services play a significant role in smart tourism as it utilizes technological means and data accumulation to automatically provide suitable and precise services to users.

This includes the application of sensors, data mining, positioning technology, social network systems (SNS), and other techniques to deliver accurate service information. In addition, smart tourism represents a logical evolutionary development of traditional tourism and e-tourism, driven by technology-based innovation. It has the potential to replace human labor in the travel, tourism, and hospitality industries through digital technologies and lastly smart tourism involves the integration of technological components into tourism products.

This encompasses a wide range of technologies such as augmented reality, real-time data, user modeling, recommender systems, social media, Internet of Things (IoT), and big data which enhance the tourism experience, offering personalized and immersive interactions. (A. Kontogianni, E. Alepis, 2020 as cited by Kononova et al., 2020). (Annex 1)

2.2.2 Digital Tourism

In recent years, the concept of digital tourism has emerged as a transformative force, reshaping the way we explore and experience the world. While the term “digital” may often be associated with virtual reality, augmented reality, and the metaverse, it encompasses much more than just the virtual realm.

Digital tourism encompasses a wide range of digital services, applications, and technologies that enhance our physical travel experiences and provide us with valuable tools and resources. From the palm of our hands, we now have access to a multitude of travel-related apps, online platforms, and services that cater to our needs, interests, and preferences.

Digital Tourism also emphasizes the development and implementation of mobile applications tailored to enhance the tourist experience. It involves the convergence of the physical and digital worlds in the context of tourism, it relies on data collection to gain a deeper understanding of tourist behavior, preferences, and experiences, ultimately enhancing the overall tourism experience.

The research of Cherevichko et al., 2019 (as cited Kononova et al., 2020), asserts that one aspect of digital tourism is the online purchase of pre-packaged tours offered by tour operators. This allows tourists to select and book their travel experiences through digital platforms conveniently and efficiently. The online availability of ready-made tours simplifies the booking process and provides tourists with a wide range of options to choose from.

The development and implementation of mobile applications plays a significant role in digital tourism. These applications cater to the needs of tourists, offering various functionalities such as destination information, navigation assistance, booking services, and personalized recommendations.

Mobile apps enhance the convenience and accessibility of tourism-related information and services, making it easier for tourists to plan and navigate their journeys. In addition, digital tourism contributes to the formation of a digital sector within the tourism economy.

This sector encompasses businesses and services that operate primarily in the digital realm, such as online travel agencies, accommodation booking platforms, and digital marketing agencies. The emergence of the digital sector in the tourism industry creates new economic opportunities and challenges traditional business models.

Digital tourism involves the convergence of the physical and digital worlds in the context of tourism. It encompasses the use of sensors to collect data, the online purchase of pre-packaged tours, the development of mobile applications, and the formation of a digital sector within the tourism economy. These concepts collectively aim to enhance the tourist experience, streamline booking processes, and capitalize on the opportunities presented by digital technologies. (Annex 2)

2.3 Emerging Trends

The digital transformation of tourism has opened a path for a series of trends that have reshaped the way people plan and experience their trips. In the context of the aftermath of Covid-19, one interesting phenomenon the tourism industry has experienced is “Revenge Travel” (Euro-news, 2023).

Revenge travel refers to the act of traveling longer and more frequently to make up for lost time and experiences, that come after enduring a prolonged period of limited international travel, many consumers now have a newfound zest for exploration. This trend has coincided with the rise of the Bleisure Traveler (Forbes, 2022), who combines work with leisure in an attempt to maximize the travel opportunity, do networking and be cost effective.

With the appearance of this new types of customers, comes the rise of mobile travel, where travelers extensively use smartphones to research, plan, book flights and accommodations, navigate, and access travel-related information on the go. In this context, Online Travel Agencies (OTAs) have gained immense popularity, offering travelers a convenient platform to book flights, hotels, vacation rentals, and other travel services.

Platforms like Expedia, Booking.com, and Airbnb have become go-to options for travelers seeking a wide range of choices and competitive prices. These types of businesses leverage user data and preferences to offer personalized recommendations and targeted marketing by Artificial Intelligence and Machine Learning Technologies.

Furthermore, Virtual Reality (VR) and Augmented Reality (AR) technologies have transformed the way travelers explore destinations, as they enable travelers to virtually experience and assess accommodations, attractions, and destinations before making their bookings, providing them with a more immersive and informed decision-making process. In addition, the adoption of contactless technologies for mobile check-ins, digital boarding passes, touchless payments, and self-service kiosks as a response to the pandemic context. And finally, blockchain technology that offers secure identity verification. These reflect the dynamic and evolving landscape of the digital tourism industry.

Advancements in technology and shifting consumer preferences continue to shape the way people plan, book, and experience their travels, ultimately enhancing the overall travel journey.



Fig 4. Mika Baumeist 2022

Fig 5. Stem T4L Unsplash 2019



TECHNOLOGICAL FRAMEWORK

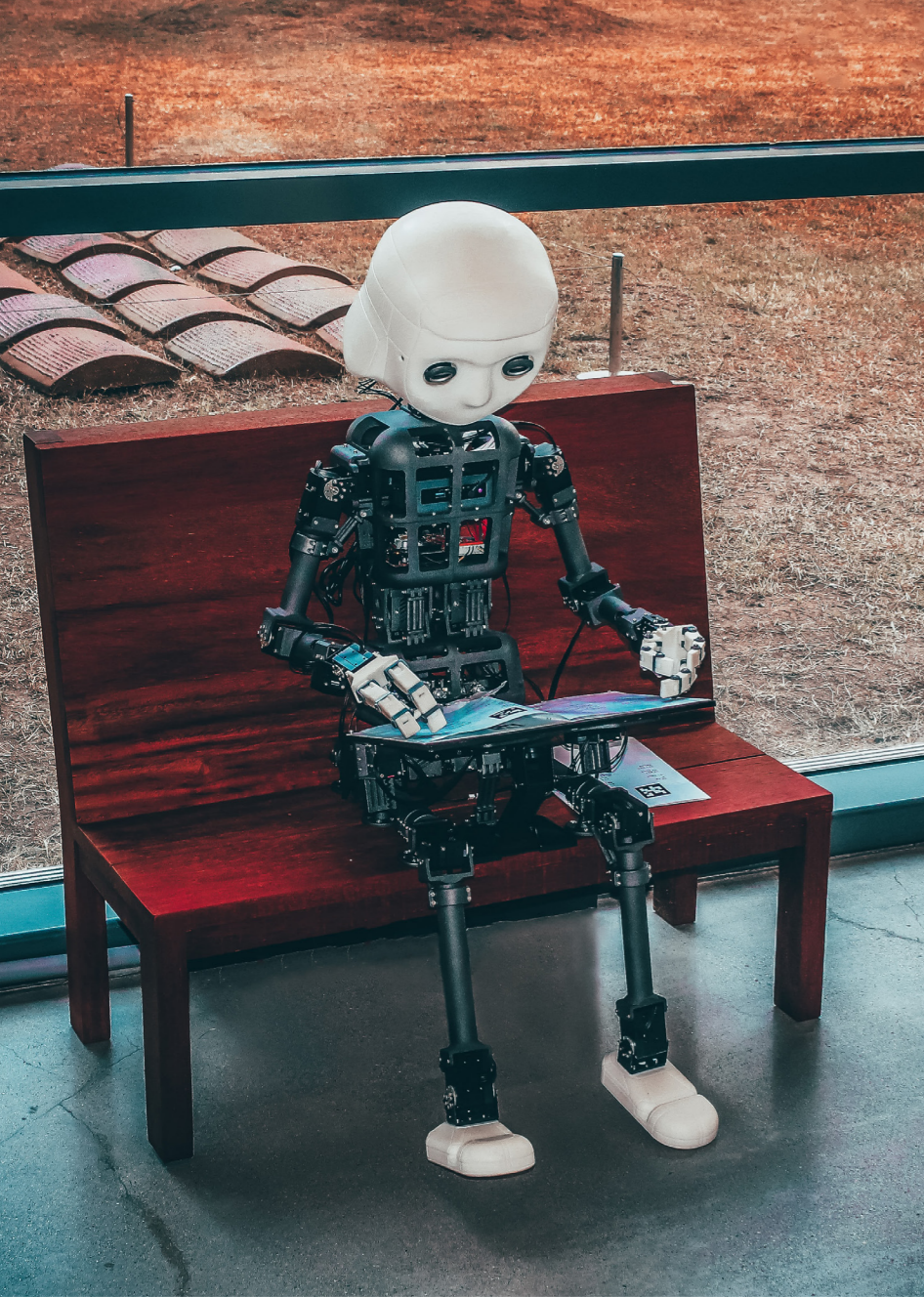


Fig 7 .Andrea De Santis,
Unsplash 2020

3. High Tech

3.1 Artificial Intelligence

To define what Artificial Intelligence (AI) is, it is important to first comprehend what the concept of intelligence entails. Amongst some of the definitions by the Merriam-Webster Dictionary, intelligence refers to the “ability to learn or understand or to deal with new or trying situations”, “the skilled use of reason”, and “the ability to perform computer functions”. For Rudas & Fautor, 2008 (as cited by Bulchand-Gidumal, 2020) intelligence envelops three crucial abilities: understand the environment and phenomena, take advantage of past experiences, and combine the knowledge available to respond appropriately to new challenges.

AI is thereby defined as “the science and engineering of making intelligent machines, especially intelligent computer programs. It is related to the similar task of using computers to understand human intelligence, but AI does not have to confine itself to methods that are biologically observable” (McCarthy, John, 2004 as cited by IBM, n.d.)

A fundamental element to the function of AI is data because it supplies the essential input for AI systems to enhance through learning, identifying, and comprehending patterns of behavior, and finally, generate valuable insights. (Bulchand-Gidumal, 2020)

Big data in the tourism industry is typically derived from two main sources: the environment and the tourists themselves.

The environment serves as a valuable resource for meteorological data, real-time information from sensors, Internet of Things (IoT) devices, and transactions, as well as events happening at the destination. On the other hand, tourists contribute data in various ways, both before, during, and after their trip. This includes online activities, offline activities, biometric and emotional data, wearables, and User-Generated Content (UGC).

Effectively utilizing UGC, requires processing with the help of Artificial Intelligence (AI) techniques. Sentiment analysis can be performed on textual information, enabling researchers and analysts to understand the sentiments expressed.

Additionally, AI can analyze, and tag characteristics of pictures, audios, and videos shared by users, such as location, participants, and sentiments expressed. These AI techniques greatly enhance the value of UGC as a data source by providing more comprehensive information for data-driven processes.

“Ever since the arrival of printing - thought to be the invention of the devil because it would put false opinions into people’s minds - people have been arguing that new technology would have disastrous consequences for language.”

—David Crystal, British linguist, academic, and author.

“By far, the greatest danger of Artificial Intelligence is that people conclude too early that they understand it.”

—Eliezer Yudkowsky American artificial intelligence researcher and writer

3.1.1 Machine Learning, Neural Networks, Deep Learning

In the scope of AI, there are two important and often mistaken with one another: Machine Learning (ML) and Deep Learning (DL) and in between the two, lies Neural Networks (NL). To better understand the framework in which this project will be developed, it is crucial to understand the difference between the three.

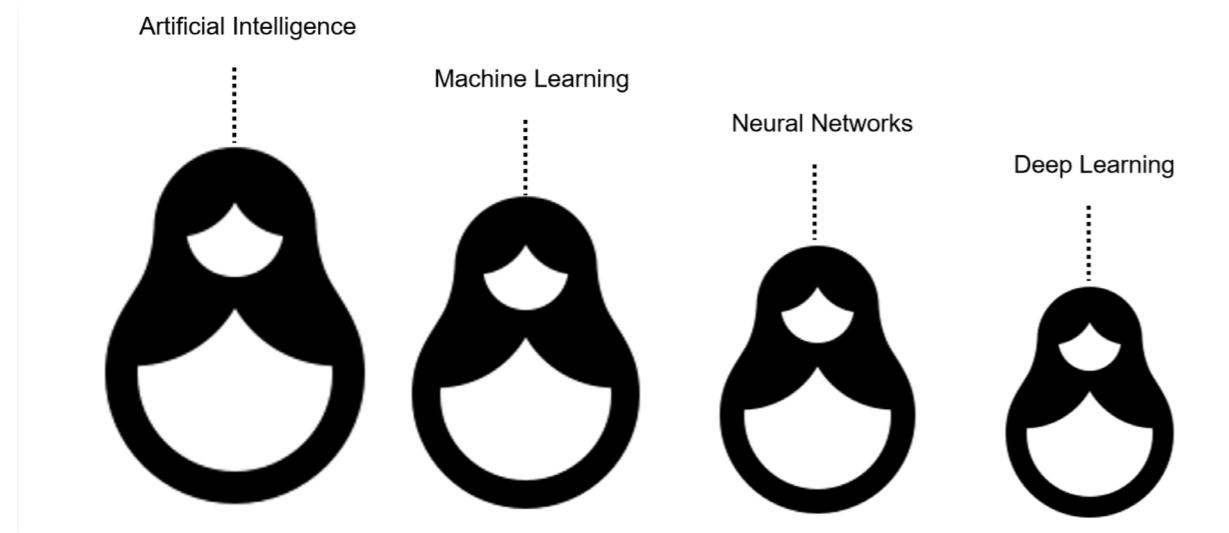


Figure 8. Kavlakoglu, Eva (May, 2020) "AI vs. Machine Learning vs. Deep Learning vs. Neural Networks: What's the Difference?"

Machine Learning

Is considered a subdivision of artificial intelligence (AI) and computer science that mimics the way humans learn by using data and algorithms to be more accurate over time. Through the application of statistical methods and algorithms, ML classifies large amounts of data and makes predictions or discovers insights on certain projects. Some basic examples of everyday use of this tool are Netflix's movie recommendations or self-driving vehicles. (IBM, n.d.) Classical ML is dependent on human intervention to learn, data scientists first need to determine and structure the data for it to be correctly processed. Depending on the degree of human intervention on raw data, there are four types of ML (UC Berkeley, 2020):

- **Supervised learning:** The dataset is labeled and classified before use to allow the algorithm to see how accurate its performance is.
- **Unsupervised learning:** The algorithm pinpoints patterns and similarities from unlabeled data.
- **Semi-supervised learning:** The algorithm makes independent conclusions as it is fed both structured and unstructured data, this way the algorithm learns to label data itself.
- **Reinforcement learning:** The algorithm learns from experiences by trial and error and gets feedback in the form of rewards and punishments.

UC Berkeley also develops on three main components to the process of ML:

- **A decision process:** The algorithm makes estimates about patterns from multiple guesses and calculations.
- **An error function:** Assesses the accuracy of the model by comparing it to known examples.
- **An updating or optimization process:** If the model can accurately fit the data it's given, it adjusts its "settings" (weights) to make its predictions match the actual examples more closely. The model keeps going through this "evaluate and improve" process, tweaking its settings on its own until it gets as accurate as possible based on a specific target.

There are multiple ML algorithms used for a wide variety of purposes, amongst which the most used are: Linear Regression, Logistic Regression, Decision Trees, Random Forests and, the one pertinent to the development of this project, Neural Networks.

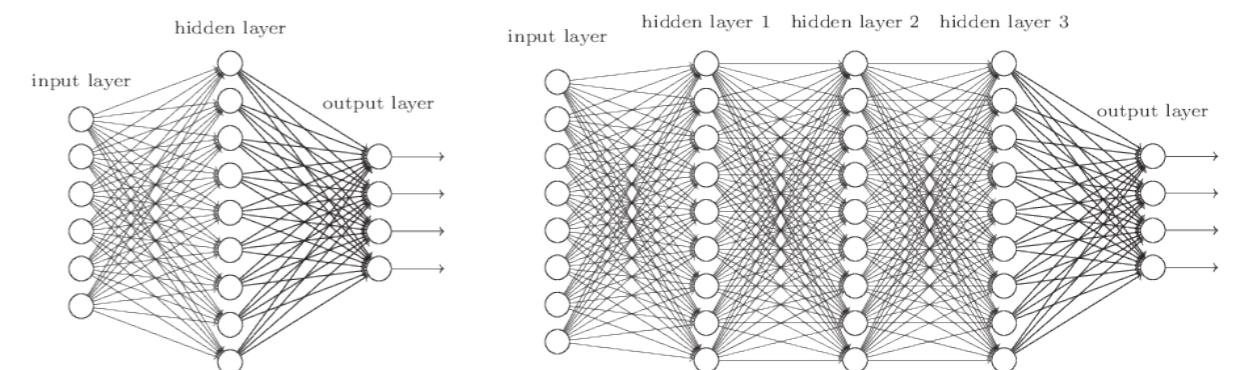
Neural Networks

Neural networks are AI algorithms that understand and classify data in a smart manner by mimicking the thought process of a human brain, by recognizing patterns in data and speech through massive amounts of intertwined processing nodes (UC Berkeley, 2020). Data is processed through layers, with each layer assigning weights before passing it to the next layer. This way the algorithm quickly learns and adjusts itself for more efficiency.

Developing more on this process IBM, n.d. defines NL basic structure as composition of three node layers: first an input layer, one hidden layer and lastly an output layer. These nodes work as artificial neurons that are connected to each other and have weights and thresholds. When the output of a node exceeds the threshold, it gets activated and passes data to the next layer. If the output is below the threshold, no data is sent to the next layer by that node. This way, information flows through the network based on whether nodes are activated or not.

If the number of layers in NN consists of more than three, including the input and output, then it is considered a Deep Learning algorithm.

Figure 9. Nielsen, Michael (December 2019) "Why are Neural Networks hard to train?"



Deep Learning (DL)

The term “deep” in the context of Deep Learning pertains to the depth of layers within a neural network. Specifically, if a neural network encompasses more than one hidden layer (UC Berkeley, 2020), it is considered a Deep Learning algorithm.

The depth of the network is indicative of its ability to process and analyze data through multiple layers of abstraction, enabling more sophisticated and intricate representations of information. Consequently, the inclusion of multiple hidden layers distinguishes Deep Learning as a distinct paradigm within the field of machine learning.

With DL the process of extracting important features from the data is automated, reducing the need for manual human involvement. Currently it also referred as “scalable machine learning.” because it works perfectly with large datasets.

A simple example of this is illustrated by MIT, 2021: “in an image recognition system, some layers of the neural network might detect individual features of a face, like eyes, nose, or mouth, while another layer would be able to tell whether those features appear in a way that indicates a face.”

Just Like NN, Deep Learning is designed to mimic the thought process of the human brain and is widely employed in various applications of machine learning. This technology drives advancements in areas such as autonomous vehicles, chatbots, and medical diagnostics.

3.1.2. When Machines Speak Human

As a subfield of AI, Natural Language Processing (NLP) is focused on providing computers with the capability to comprehend text and spoken language like humans. (IBM, n.d.). According to IBM, NLP “merges rule-based computational linguistics with statistical, machine learning, and deep learning models”.

These technologies allow computers to process human language and understand complex concepts such as intent and sentiment, in the form of text and voice. In the average daily basis, NLP can be found in digital assistants, GPS systems or customer service chatbots.

Since this technology addresses specifically human language, there is a series of tasks it need to perform in order to decipher the complexity of people’s expressions: metaphors, sarcasm, homonyms, homophones, to name a few.

Citing IBM’s definition of NLP, among these tasks are:

- Speech recognition, also known as speech-to-text, involves converting voice data into text data and is crucial for applications that rely on voice commands or respond to spoken questions.
- Grammatical tagging, that determines context and use in speech.
- Word sense disambiguation, which refers to the selection of the correct meaning of a word, depending on the context.
- Name entity recognition identifies important entities like locations and names.

- Co-reference resolution identifies when two words refer to the same thing or entity, or interpreting a metaphor, slang.

- Sentiment analysis, which extracts subjective qualities such as emotions and sentiments.

-Natural Language Generation, that puts structured information in comprehensive human language.

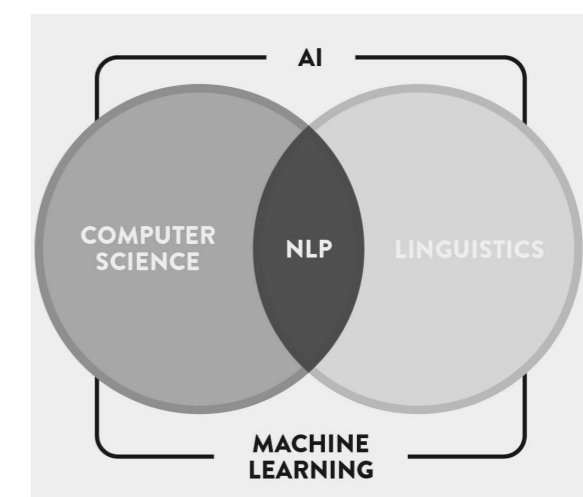


Figure 10. Karnes, KC (2019) “Introduction to (NLP)”

Some uses of NLP include virtual agents and chatbots which recognize prompts and commands from human requests and in return provide relevant answers; another tool is Social Media Sentiment Analysis, which has become a crucial tool for businesses to gain insights from social media data.

With this method, attitudes and emotions towards certain products/services can be extracted from social media posts and reviews. Another use worth mentioning for NLP is text summarization, this tool sorts through vast amounts of text and provides summarized synopsis of databases.

3.1.3. Garbage In, Garbage Out

In the realm of data analysis and machine learning, the phrase ‘garbage in, garbage out’ has become a well-known mantra. It encapsulates the critical importance of data quality in determining the reliability and effectiveness of any analytical process or model.

It is a common understanding in ML that the better the amount of data, the better the models are trained. Unfortunately, real-world data is often polluted with imperfections such as inconsistencies, noise, incomplete information, and missing values. It is derived from diverse sources through the utilization of data mining and warehousing techniques. (Baheti,2021).

For this reason, data cleaning is mandatory for a successful result. Data pre-processing, as a fundamental step in the data pipeline, plays a pivotal role in transforming raw and unrefined data into valuable insights.

By meticulously cleansing, transforming, and enhancing the data, pre-processing ensures that only high-quality, reliable, and relevant information is fed into subsequent analytical tasks.

There are 4 main techniques used for data pre-processing (Baheti, 2021):

Data Cleaning: Involves identifying and handling any errors, inconsistencies, or missing values in the dataset. It may include techniques such as imputation, removing duplicates, and correcting data errors.

Data Integration: In this step, data from different sources or formats is combined into a single cohesive dataset. It may involve resolving naming conflicts, data format standardization, and merging relevant data.

Data Transformation: This step involves converting the data into a suitable format for analysis. It may include scaling, normalization, encoding categorical variables, and feature engineering to create new informative features.

Data Reduction: This step focuses on reducing the dimensionality of the dataset by selecting relevant features or applying techniques such as dimensionality reduction or feature selection. This helps in reducing computational complexity and noise in the data.

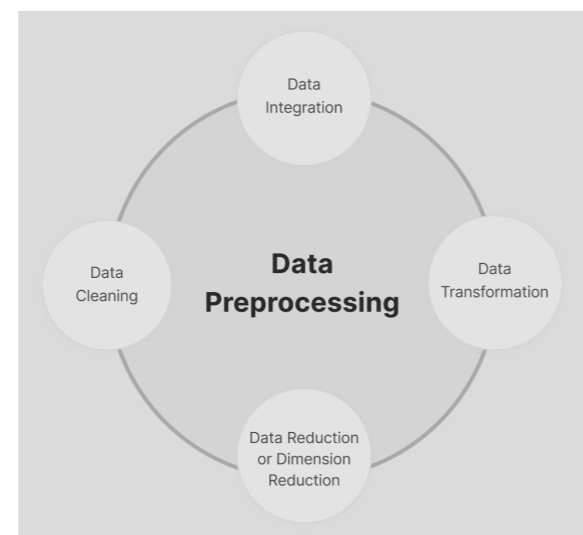


Figure 11. Baheti. 2021. “A Simple Guide to Data Preprocessing in Machine Learning”

3.1.4. Apprehension & Enthusiasm

The rise of generative AI models like ChatGPT, DALL-E, and MidJourney has sparked both fascination and apprehension.

These models showcase impressive capabilities in generating human-like text, images, and music, but also raise concerns about systemic bias, privacy, misinformation, malicious use, and displacement of human labor.

The development of regulatory frameworks and ethical guidelines lags behind the rapid advancement of AI, calling for responsible and transparent use.

To strike a balance, we should embrace the potential benefits of generative AI while addressing legitimate concerns.

Open discussions, interdisciplinary collaboration, and appropriate regulations can help mitigate apprehensions and ensure ethical use.

AI can increase efficiency, bridge gaps, improve accessibility, revolutionize healthcare, fuel innovation, and enhance user experiences.

It is crucial to remember that AI is a tool developed and used by humans. Responsible development, ethical considerations, and ongoing research are necessary to align AI with human values.

By being educated, fostering critical thinking, and advocating for ethical practices, we can harness the power of AI to drive innovation and improve lives.

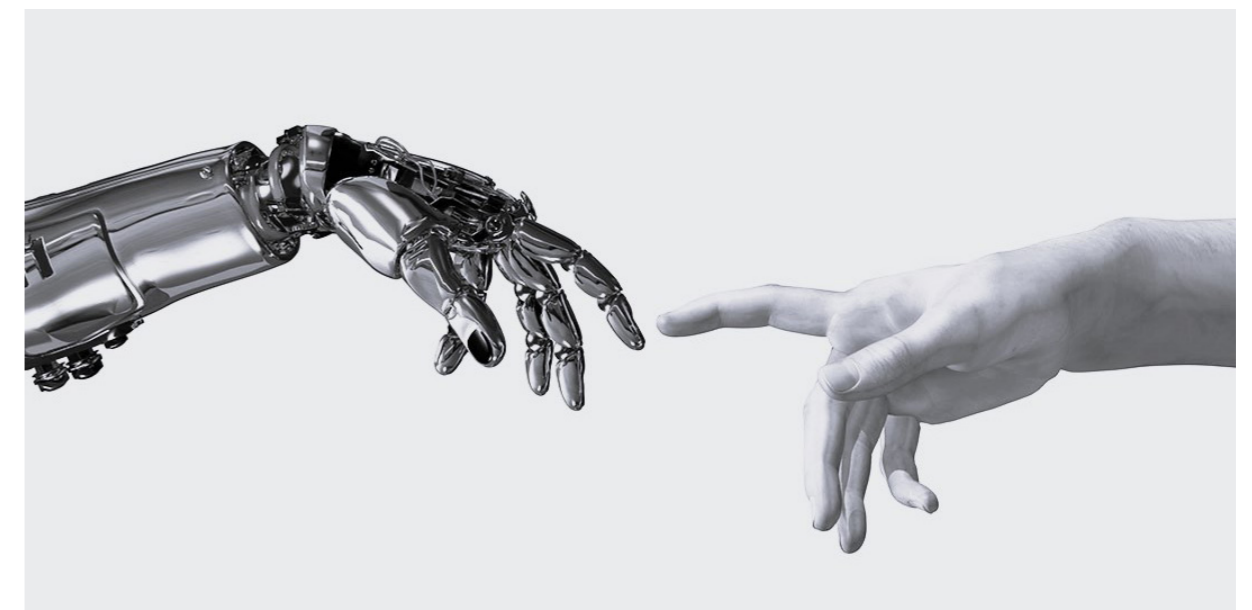


Figure 12. Cser, Tamas (2018) Is AI Good for Society? - The Good, The Bad & The Ugly

CONCEPTUAL APPROACH



Fig 13 . EV, Unsplash 2018

4. Context of the Project

4.1. Online Presence and Privacy

In today's digital age, our lives have become intricately intertwined with the online world. We share our thoughts, experiences, and personal information on various online platforms, connecting with friends, family, and even strangers across the globe. However, this increasing online presence raises important concerns about privacy and the protection of our personal data.

As we navigate the vast landscape of social media, online shopping, and digital communication, we leave behind a trail of digital footprints—traces of our activities, interactions, and preferences. These footprints, though seemingly innocuous, can paint a detailed picture of our lives, interests, and behaviors. Our digital footprints are compiled, analyzed, and often monetized by companies and organizations, shaping the online experiences we encounter.

This interplay between our digital presence and the protection of our privacy gives rise to what is known as the privacy paradox. On one hand, we crave the convenience, connectivity, and personalized experiences offered by technology. On the other hand, we value our privacy and the control over our personal information. Navigating this paradox becomes a delicate balancing act as we weigh the benefits of sharing information against the potential risks of misuse and intrusion.

“You can't talk about big data without talking about things like privacy and ownership.”

—Rick Smolan, photographer, and co-author of The Human Face of Big Data

4.1.1. Digital Footprint

As stated before, individuals currently possess two identities, a physical identity that can be verified by official paper documentation, and digital one that refers to an individual's interactions online, including search history and social media (Park, 2017 as cited by Blue et al 2018).

These online interactions leave behind what is called a digital footprint. A digital footprint indicates a person's online existence and serves as proof of their digital and physical identities. It records the trail and artifacts left behind by people engaging in a digital environment (Fish, 2009 as cited by Blue et al, 2018).

As digital footprints map and record more parts of an individual's real-world existence, they provide valuable information and qualities about subjects such as professional affiliations, social relationships, personal health information, purchases, habits, interests, and much more. (Blue et al, 2018).

In the case of travel digital footprint, social media posts of food, landmark visits, leisure activities, check-ins into hotels or cities, pages followed, interactions made with content such as videos watched and liked regarding travel and tourism, make for meaningful data that can reveal a lot about what kind of travel each individual is interested in.

Before and during their trip, tourists engage in online searches and bookings for services, leaving a digital footprint that can be tracked. Additionally, they leave offline traces such as movements, booking records, and consumption patterns, which can be captured through GPS data, mobile roaming, Bluetooth devices like beacons, IoT devices, and Point of Sale (PoS) systems.

Biometric and emotional data, such as thermal images and facial recognition, can also be automatically collected during the trip. Moreover, depending on the user's consent, data from wearables like smartwatches, activity trackers, and clothing can be gathered. Lastly, UGC is generated during and after the trip, including online reviews, social media comments, and shared pictures and videos. (Bulchand-Gidumal, 2020)

User profiles result from the combination and analysis of this data and is used to offer personalized recommendations for products and services that cater each users' needs. (Bulchand-Gidumal, 2020)

4.1.2 Privacy Paradox

Whenever individuals use online services, they make a decision to give up their privacy in return for benefits. People, for example, are sometimes required to identify their location to obtain a real-time weather prediction or to share their preferences to get appropriate suggestions for products or activities. Indeed, most free mobile services' economic models are based on similar trade-offs: data is the currency in which users pay for online services. (Liu & Simpson,2020)

Privacy concerns are an essential part of the digital identity formation process, especially because these concerns may prohibit information disclosure. (Papaoannou, et al 2020). Understandably, users have concerns about how much data they are really disclosing and what happens to this data once it is property of a third party. However, some research suggests that online users' privacy concerns may vary depending on the situation, aspects such as perceived benefits, financial cost, privacy risk, take part in users' final decisions of information disclosure (Liu & Simpson,2020).

When users are faced with the dilemma of whether the perceived benefits of using online services are worth trading personal information or not, their behavior can vary substantially from their self-reports. Users who claim to have serious concerns about privacy risks might also voluntarily share their personal information for certain rewards or allowances. (Liu & Simpson,2020).

Liu and Simpson assert that there are three main factors that directly influence the willingness of users to exchange personal information for online services.

First, "awareness and knowledge of privacy risks", clear perception of privacy practices in digital services allows users to make mindful decisions about data-sharing. However, their research suggests that users who are unaware of privacy protocols are more likely to share personal information out of ignorance.

To add on, findings point to the fact that some users who regard themselves as wary of privacy policies, would unconsciously ignore these beliefs when faced with a worthy trade-off. Second is "trust in service providers" meaning the more reputable the enterprise, the more likely users would feel comfortable sharing information with it. Research findings hint that trust in the prestige of a company "weakens users' awareness of privacy risks" (Liu & Simpson,2020). Lastly, "desire for mobile services", aiming that a strong necessity for special and unique digital services may incline users to overlook their privacy concerns in favor of getting their needs fulfilled. (Liu & Simpson,2020).

Another interesting factor worth mentioning is what Liu & Simpson call "beliefs of cyber privacy", which touches on the users' assumption that cyber security does not exist, they have got nothing to hide or even if their information is shared, they don't regard their data as "valuable".

We can conclude that privacy is a decisive aspect of digital tool use, however, while users appreciate transparency and honesty, they are willing to trade data in certain situations when the digital tool is perceived to be beneficial to them.

4.2. Motivations for Travel

“I have wandered all my life, and I have also traveled; the difference between the two being this, that we wander for distraction, but we travel for fulfillment.”

— Hilaire Belloc, poet, historian, essayist

“Of the gladdest moments in human life, methinks, is the departure upon a distant journey into unknown lands. Shaking off with one mighty effort the fetters of Habit, the leaden weight of Routine, the cloak of many Cares and the slavery of Civilization, man feels once happier.”

— Richard Francis Burton, explorer, writer, orientalist

Human beings have an inherent desire to explore and discover the world around them. From ancient times to the modern era, travel has played a significant role in fulfilling this fundamental human need.

The motivations that drive individuals to embark on journeys are diverse and multifaceted, ranging from basic physiological needs to more complex psychological and emotional aspirations.

Understanding these motivations is crucial in comprehending why people choose to travel, how they make their travel decisions, and what experiences they seek

Several theories and frameworks have been developed to shed light on the underlying factors that shape our travel motivations.

We will explore prominent theories to gain valuable insights into the psychological, social, and cultural forces that influence our travel choices. They help us recognize that travel is not merely about reaching a destination but a journey of self-discovery, personal growth, and fulfillment.

By delving into these theories, we can gain a deeper understanding of the complex interplay between individual desires, external influences, and the quest for meaningful experiences.

4.2.1. Push & Pull Factors

When discussing motivations for travel, it's essential to consider the factors that push individuals to leave their current location and those that pull them towards new destinations. These factors, commonly known as push and pull factors, help us understand the underlying reasons for people's travel choices.

Push factors encompass a range of circumstances, motivations, and stimuli that exert a “pushing” effect, prompting individuals to seek alternatives to their current location. These factors typically arise from a sense of discontent with the prevailing conditions, whether it be dissatisfaction with the local environment, economic constraints, political instability, safety concerns, or a general desire for change. Push factors act as catalysts, generating a compelling impetus for individuals to explore new horizons, escape the limitations of their current situation, or pursue personal growth and enrichment through travel.

Push factors are the underlying forces that direct an individual's decision to travel (Chen & Chen, 2015 as cited by Jumrin & Maryono, 2018), they encompass psychological motivators such as social interaction, the yearning for escape, adventure, relaxation, and self-exploration, and many more (Annex 3)

In contrast, pull factors represent the alluring forces that draw individuals towards specific destinations, captivating their attention and sparking a desire to visit. These factors encompass the attractions, opportunities, and positive aspects that a particular location offers. This refers to the destination image and it is represented by the complete perception of the visitor towards the tourist site.

(Lee, 2009 as cited by Jumrin & Maryono, 2018).

Perception holds a significant influence and acts as a pull factor that drives tourists to select certain destinations, and according to Cherry, 2003 (as cited by Jumrin & Maryono, 2018) there is an intricate link between perception and the stimulus received from the surrounding environment, subsequently encouraging individuals to react in the form of activities.

Cultural richness, historical significance, natural beauty, recreational pursuits, favorable climatic conditions, renowned landmarks, and the reputation for warm hospitality are among the many elements that contribute to the magnetic pull of a destination. Pull factors play a pivotal role in inspiring and captivating the imaginations of individuals, enticing them with the promise of novel experiences, adventures, and opportunities for self-discovery. (Annex 3)

The relationship between decision-making and push and pull factors is a nuanced and intricate one. As individuals engage in the process of travel planning, they carefully evaluate and weigh the influence of these factors, considering the interplay between their personal circumstances, aspirations, and the allure of various destinations.

Push factors serve to incite the need for change, motivating individuals to seek out alternative environments or experiences. Simultaneously, pull factors provide an attractive vision of what awaits at the chosen destination, encouraging individuals to pursue their travel aspirations with enthusiasm and anticipation.

4.2.2. Travel Career Theory

The Travel Career theory, developed by Pearce, 1991 (as cited by Jiang 2019), is a hierarchical system consisting of five levels, designed to rank and categorize the post-travel motivational descriptions provided by tourists regarding their holiday experiences.

It was inspired by Maslow's theory and at its core, is the idea that people's motivations and preferences for travel change as they gain more experience and knowledge about different destinations and travel styles.

The Travel Career Ladder (TCL) recognizes that travelers move through different stages or levels, each characterized by distinct motivations and behaviors. The model proposes that people have a specific career goal in their tourism behavior and as they gain more experience, their focus shifts towards fulfilling higher-level needs and seeking greater satisfaction. (Pierce 1991, as cited in Ryan, 1998) The steps of the ladder (from bottom to top) are physiological needs, safety/security, relationship needs, self-esteem/development needs, and fulfillment needs. Later, Pearce (2011) improved his theory by developing the Travel Career Pattern (TCP), see Annex 4.

4.2.3. Means-End Chain

The Means-End Chain provides a framework for understanding the relationships between personal values, product attributes and consumer benefits or consequences, and. (Gutman, 1982 as cited by Jiang 2019).

Personal values are the underlying principles or beliefs that individuals hold dear. These values guide and shape their preferences, behaviors, and decision-making processes. In the context of the MEC theory, personal values are the ultimate ends or goals that individuals seek to fulfill through the consumption of products or services. According to Rokeach, 1973 (as cited by Jiang 2019), there are two types of personal values:

-Instrumental Values: Which are about the way we behave or act. They describe the qualities or behaviors that we consider important or desirable in ourselves and others. These values are like guidelines for how we should ideally conduct ourselves. For example, instrumental values could include honesty, kindness, hard work, or fairness, in the context of travel, they could include sustainability, reliability, honesty, etc.

- Terminal Values: Are about the end results or outcomes that we aspire to achieve in life. They reflect the ultimate goals or states of being that we consider valuable and meaningful. Terminal values are related to our desired end-states of existence. For example, happiness, success, inner peace, love, or personal fulfillment, and in the context of travel, they could range from relaxation, exploration, connection to personal growth.

Next, Attributes refer to the perceived physical or abstract characteristics of a product/service (Gutman, 1997, as cited by Jiang, 2019). In the tourism industry, Jiang recognizes two relevant types of attributes:

- Concrete: An objective property of a destination (local customs)

- Abstract: Relative, reflective attribute (fame, perceived environment)

Finally, Consumer benefits are the positive outcomes or consequences that consumers associate with these attributes and result from their behaviors (Gutman 1982, as cited by Jing, 2019). Benefits are the reasons why consumers value certain attributes of a product.

The MEC theory suggests that there is a hierarchical relationship between these three components, (Jiang, 2019) and it proposes that attributes are means to achieve certain benefits, and these benefits, in turn, serve as means to fulfill personal values.

4.3. Travel Decision Making

“If you make customers unhappy in the physical world, they might each tell 6 friends. If you make customers unhappy on the Internet, they can each tell 6,000 friends.”

– Jeff Bezos, CEO at Amazon.com

In today’s digital age, the influence of social proof has become increasingly important in the travel industry and has a profound impact on how individuals perceive destinations and make decisions.

It is crucial to recognize the way the landscape has evolved with the advent of digital platforms and social media, and how these technologies offer individuals valuable insights, authentic experiences, and peer recommendations that influence their perception of destinations and ultimately impact their choices.

Rather than relying solely on traditional sources of information, such as travel agencies or official destination websites, travelers now turn to social media platforms, online reviews, and recommendations from fellow travelers to inform their decision-making.

4.3.1. User Generated Content

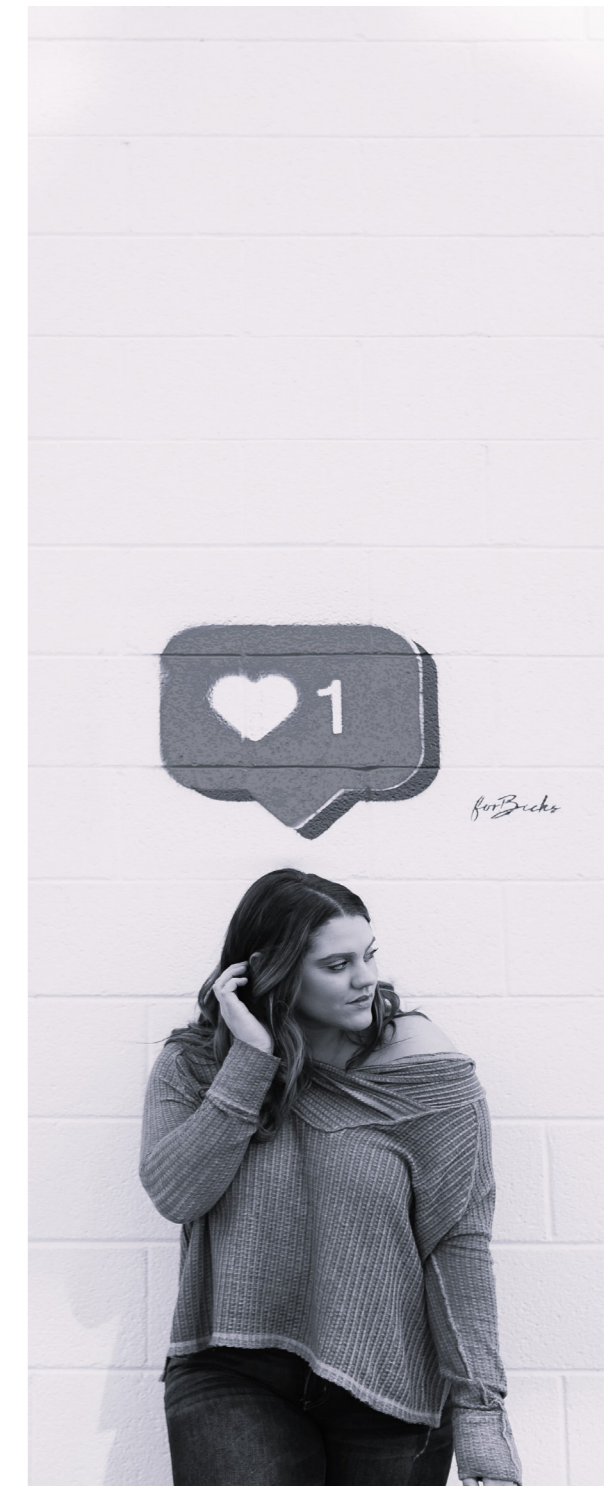
As communication channels have evolved through time, people search for inspiration and information in the available channels, with the rise of social media, paper magazines and travel encyclopedias are a thing of the past.

Since social media allows users to share their experiences, it has become one of the most popular sources of information for travelers about their potential destinations, many of them being content created by travel Social Media Influencers” (SMI).

Horton and Richard (1956) defined parasocial interaction as a face-to-face illusory link between the audience and media icons such as celebrities, artists, and broadcasters, it is described as the establishment of a cordial relationship between customers and personas (characters or media figures) via the use of certain media.

In the same way, SMI’s presence is more affordable if they create a positive bond with their followers. Apart from the importance of aesthetics, the authenticity of information shared will determine the strength and success of the parasocial interactions. Consequently, parasocial interactions have a direct influence on followers’ behavior and consumer decision. (Cheng et al, 2023)

Fig 14 . Karsten Winegeart, Unsplash , 2021

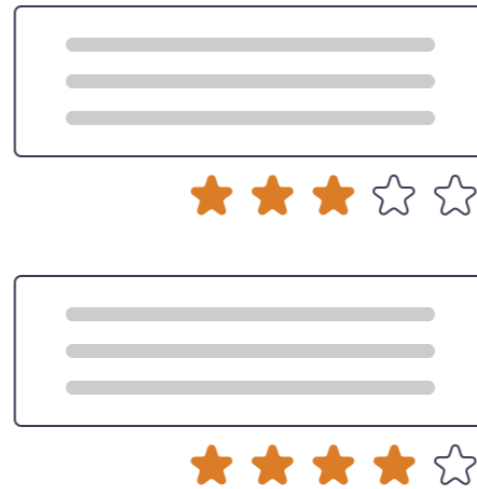


4.3.2. Electronic Word of Mouth

Another important aspect worth studying is the trust of consumers, in this case travelers in other travelers' reviews. This is a psychological concept called "social proof" and refers to reviews, social likes, online mentions, and testimonials for products, services, or companies. People tend to favor the honest feedback of other travelers over biased marketing suggestions.

According to a survey, 93 percent of consumers said that online reviews have impacted their purchase habits, some going as far as to say they will not engage with a business or product that has less than a 3.3-star rating. (Bright Local, 2023). Other sources suggest that consumers are 50 percent more likely to be motivated by online reviews over discounts.

Social proof encompasses various forms of feedback, such as product reviews, social media likes, online mentions, and testimonials, which pertain to products, services, or brands. The significant aspect of social proof lies in the fact that it originates from fellow consumers rather than the brand, thereby rendering the positive communication surrounding a product or service as more genuine and reliable.



4.3. Travel Decision Making

"I saw myself sitting in the crotch of this fig tree, starving to death, just because I couldn't make up my mind which of the figs I would choose. I wanted each and every one of them, but choosing one meant losing all the rest, and, as I sat there, unable to decide, the figs began to wrinkle and go black, and, one by one, they plopped to the ground at my feet."

– Sylvia Plath, *The Bell Jar*

4.4.1 The Paradox of Choice

As explained by American psychologist, Barry Schwartz, most wealthy societies are ruled by what he calls an "official syllogism": The more freedom people have, the happier they are; the more wealth they have, the better off they are. (Claremont Mckenna College, 2017)

He points out to the idea that in our societies, there is not such a thing as too much freedom, and every opportunity to enhance freedom should be taken. By default, in our understanding, enhancing freedom means to enhance choice and to enhance choice is to add more options to choose from.

The more choices we have, the more well-being we have. Granted, multiple choices are related with many psychological dimensions to our wellbeing, such as autonomy and control.

But he also brings light on the negative aspects, some that psychology professionals and economists often overlook, he encourages people to ask themselves if choice can only be good. The concept of the paradox of choice sets out from the affirmation that while people assume that having more choices will make them happier and more satisfied, in reality, it often has the opposite effect. Schwartz asserts that there are three negative effects.

-Instead of liberating, instead of freeing people, choice can paralyze people with indecision.

-It leads people to make bad decisions.

-When people choose things from a large choice set, they end up less satisfied than if they had chosen the same things from a smaller choice set.

Schwartz goes into more depth to develop the last point and brings up three reasons.

-Regret and anticipated regret: When faced with the uncertainty of the perfection of choice, the more options there are, the more dissatisfied individuals are about their decision. Regretting refused alternatives in the face of anything less than flawless makes the things you chose less good subjectively than they would otherwise be. For the sake of avoiding regret and second-guessing, people do not choose. (Claremont Mckenna College, 2017)

-Missed opportunities: The act of choosing one option can prevent individuals from experiencing other options they may have preferred, thereby reducing overall satisfaction. The accumulation of missed opportunities subtracts from the satisfaction that one derives from the chosen option. People can only do one thing at a time, and by spending time thinking about lost opportunities, making comparisons, what they are actually doing will be less fulfilling.

-Escalation of expectation: Having too many choices harmfully raises expectations and demands more time for decision-making. On the opposite standpoint when expectations are humble, experiences will most of the time exceed them. In the traveling domain, individuals have a wide array of options to choose from.

For the focus of this project, it is a must to understand the manner in which people go about making travel choices in the present day and recognize the drivers and constraints for travel decision-making.

4.4.2 The Cocktail Party Effect

The cocktail party effect is the ability to focus one's attention on a particular stimulus or conversation amidst a sea of distractions, such as background noise at a social gathering. In the context of personalization of travel services, this effect relates to the idea that individuals are more likely to pay attention to and engage with information that is personally relevant to them, even in a crowded or noisy environment.

By tailoring services to the individual's preferences and needs, personalization can help overcome the paradox of choice by reducing the number of options presented to the individual and presenting them with options that are more likely to be relevant to their interests.

This, in turn, can make decision-making easier and more satisfying for the individual, as they are more likely to be presented with options that are relevant and appealing to them, rather than being overwhelmed by a vast array of irrelevant choices.

Therefore, personalization can enhance the cocktail party effect by enabling individuals to focus their attention on options that are most relevant to them, which can lead to easier and more satisfying decision-making.



Fig 15. Cocktail Party Effect, Media Production Lab, EdTech, University of Toronto

5. Case Studies

5.1. TravelGPT

TravelGPT is an AI-generated travel guide that provides a comprehensive list of the best places to visit in your chosen destination. It boasts an extensive coverage of fifteen chapters, providing travelers with a complete guide on where to go, what to see and what to do.

The tool is particularly useful for individuals who are planning a trip to their dream destination, as it provides them with detailed insights on the places they wish to visit.

In terms of functionality, TravelGPT provides users with a user-friendly interface that is easy to navigate. By simply typing in their destination, travelers can access a wide range of recommendations on accommodation, dining options, local attractions, and activities, all powered by AI-generated data.

With its AI-generated recommendations and wealth of information on local attractions and activities it provides users with a comprehensive travel guide that will help them make the most of their trip.

I want to travel to Barcelona

Start my trip

Figures 17 & 18. Travel GPT, 2022

Transportation

Barcelona has a well-developed transportation system that allows locals and visitors to move around the city. In this chapter, we will cover the different means of transportation available in Barcelona and their benefits.

Metro

The metro is the most convenient and affordable way of transportation in Barcelona. There are 19 lines that cover the city, and it operates from 5 am to midnight on weekdays, and until 2 am on Saturday. It is a fast and efficient means of transport that connects the city's most important landmarks, such as La Sagrada Família.

Bus

Barcelona also has an extensive bus network, with more than 100 lines that cover all parts of the city. The buses operate from 5 am till midnight, with some night buses operating after midnight. Unlike the metro, the buses have more stops, allowing you to get off at your desired location. However, the buses are slower than the metro during peak hours as traffic can slow down progress.

Recommend me something | Tell me more | I have a low budget | I have a high budget | Give me more

Ask anything...



Fig 16. Fikri Rasyid, Unsplash 2018

But for all the potential problems, an A.I.-powered future could still be a boon to travelers: If ChatGPT or other generative systems gain access to up-to-the-minute information, a sudden change in one plan could automatically ripple through the rest”

—Chekitan Dev, professor Cornell University for The New York Times

5.2. iPlan.Ai

iPlan.ai uses advanced algorithms and natural language processing to create custom travel itineraries for users.

To run the application, users enter their travel dates, destination, and interests, and it generates a detailed itinerary that includes recommended activities, restaurants, and accommodations.

Users can then customize the itinerary further by adding or removing items or adjusting the schedule. It is a free service that relies on ads to generate revenue.

There is still limited flexibility on the customizing features for itineraries and recommendations relying on limited data that could result in inaccurate or irrelevant travel recommendations.

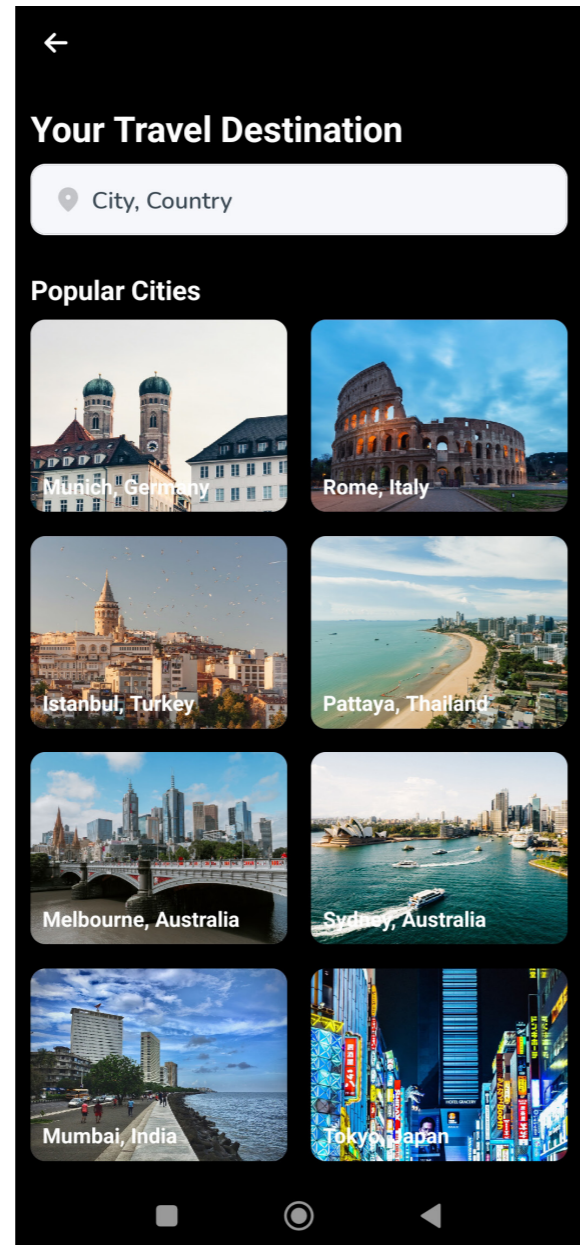


Fig 19. iPlan.Ai , 2022.

5.3. TripNotes

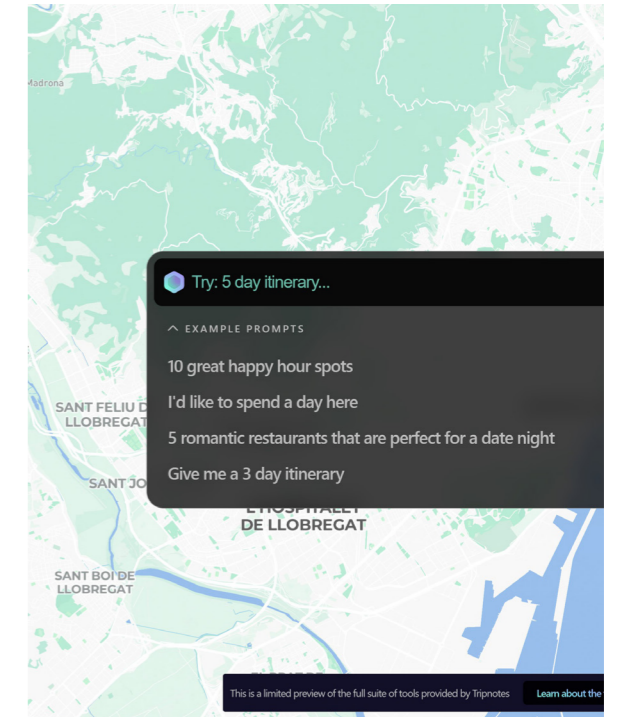
iTripNotes is a travel planning tool that helps users automatically tag, map and research each place they mention.

The interface is similar to the one used on ChatGPT, as users need to input their interest in the form of a phrase, it strongly relies on the users' prompting ability.

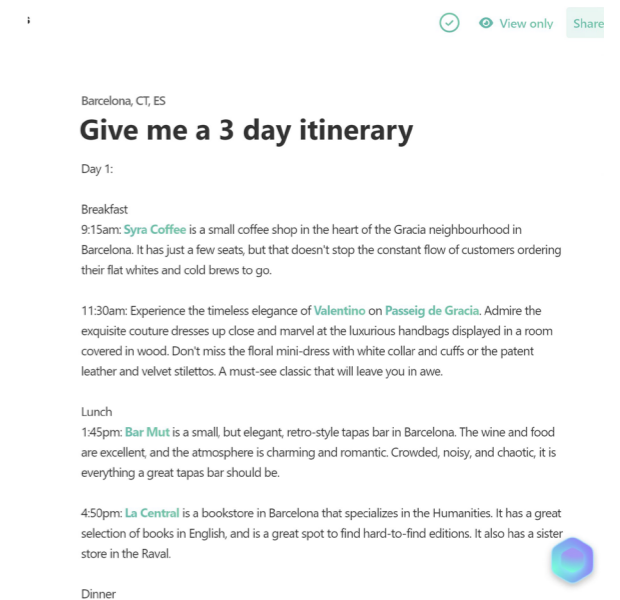
TripNotes uses databases and analytics tools to store and process user data, such as trip itineraries and user preferences, towards generating personalized recommendations and insights.

It automatically maps data from rich sources such as social media, articles from critics, blogs, and text messages. Each users' guide is linked to detailed listings with relevant TikToks, reviews, their Instagram, it allows users to directly book services such as restauration & transportation directly from the note.

Some of the features of TripNotes include collaboration, as users can invite friends to share ideas and suggestions, real-time updates, offline access for areas with limited internet connectivity, and safety information. It comes in website and telephone application format.



Figures 20 & 21. TripNotes, 2022.

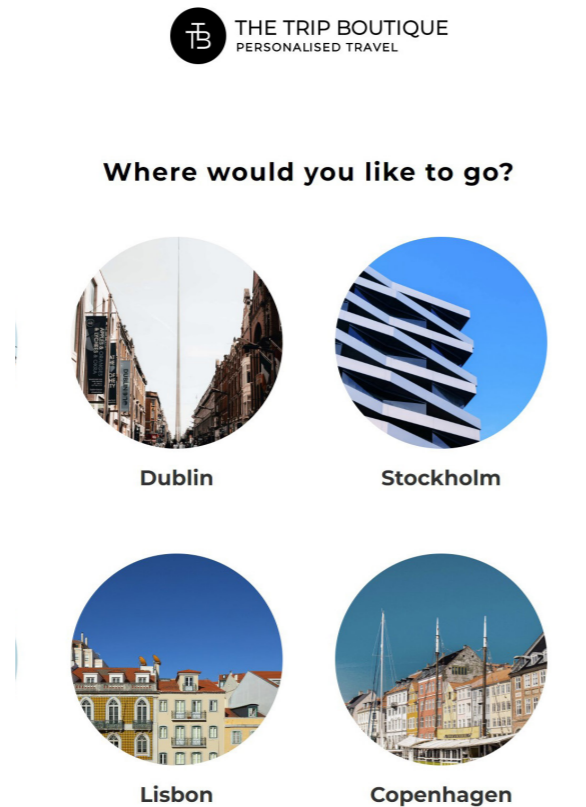


5.4 The Trip Boutique

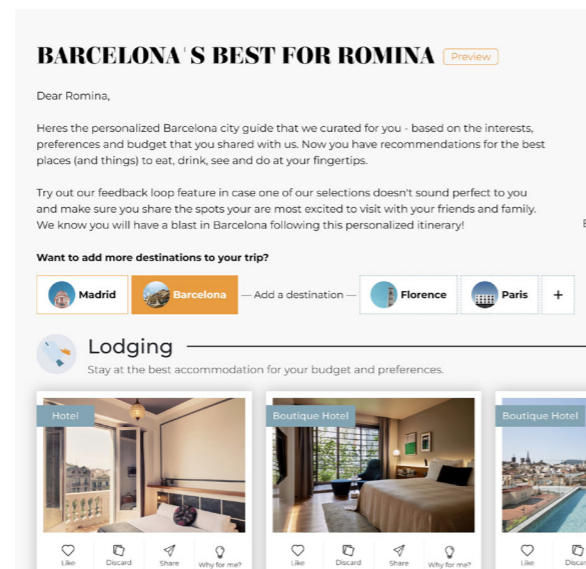
The Trip Boutique is a travel service that offers personalized and curated travel itineraries to suit individual preferences and interests. To begin the process, users are invited to provide information about themselves through a short quiz. This quiz covers aspects such as their travel preferences, interests, and style. By gathering these details, The Trip Boutique can utilize the expertise of their local curators to recommend a travel itinerary that aligns with the individual's personality.

Upon completing the quiz, users receive a complimentary set of tailored recommendations for one full travel day, which includes suggestions for hotels, restaurants, events, and activities. This initial offering allows users to get a taste of what The Trip Boutique has to offer. If satisfied, users can opt for the premium service at a cost.

The itineraries provided by The Trip Boutique are curated by their local experts, and the service also includes three revisions, allowing users to fine-tune their itinerary based on their likes and dislikes. Available on both web and mobile platforms, provides accessibility and convenience for users to access their travel recommendations and bookings from anywhere.



Figures 22 & 23. The Trip Boutique, 2022.



5.5 Review of available technologies

During my exploration of various generative AI tools and services that offer customized tour itineraries based on user prompts or quiz questionnaires when creating traveler profiles, I initially found the concept intriguing and innovative for personalization and unique travel recommendations.

However, upon using these tools myself, I noticed a deficiency in their ability to grasp the true needs and preferences of individual users, suggesting a need for deeper comprehension.

Given the abundance of data available about us online, one might expect this task to be more easily accomplished.

Furthermore, I found that some of these services' present itineraries in a suboptimal and illogical manner, raising the question of why the outcome lacks the expected level of intelligence despite the availability of advanced tools.

Is technology as intelligent as it claims to be?

Could it be lacking sufficient data?

IMPLEMENTATION



Fig 24. Tom Barret
Unsplash 2017

6. Inspiration

The rising popularity and advancements in AI technology have garnered significant attention across diverse industries. This technology possesses the capability to generate content, simulate human-like behavior, and deliver personalized experiences, thereby opening up new avenues for innovation.

Concurrently, social media platforms have emerged as influential forces in shaping consumer behavior and purchase decisions. People actively share their preferences, interests, and experiences on these platforms, thereby generating a substantial amount of data that reflects their individual tastes.

Through careful observation of my own social media presence, as well as that of my peers, it becomes evident that a tremendous volume of valuable information is produced on a daily basis. In today's digital landscape we find ourselves continuously engaging with content. While some of this content is shared with friends, other pieces are deemed valuable and worthy of saving for future reference and go straight to the "save for later" album/file.

Amidst the rapid flow of information, this later (most of the time) never comes. This once valuable information gets buried under the newer, more relevant next best thing.

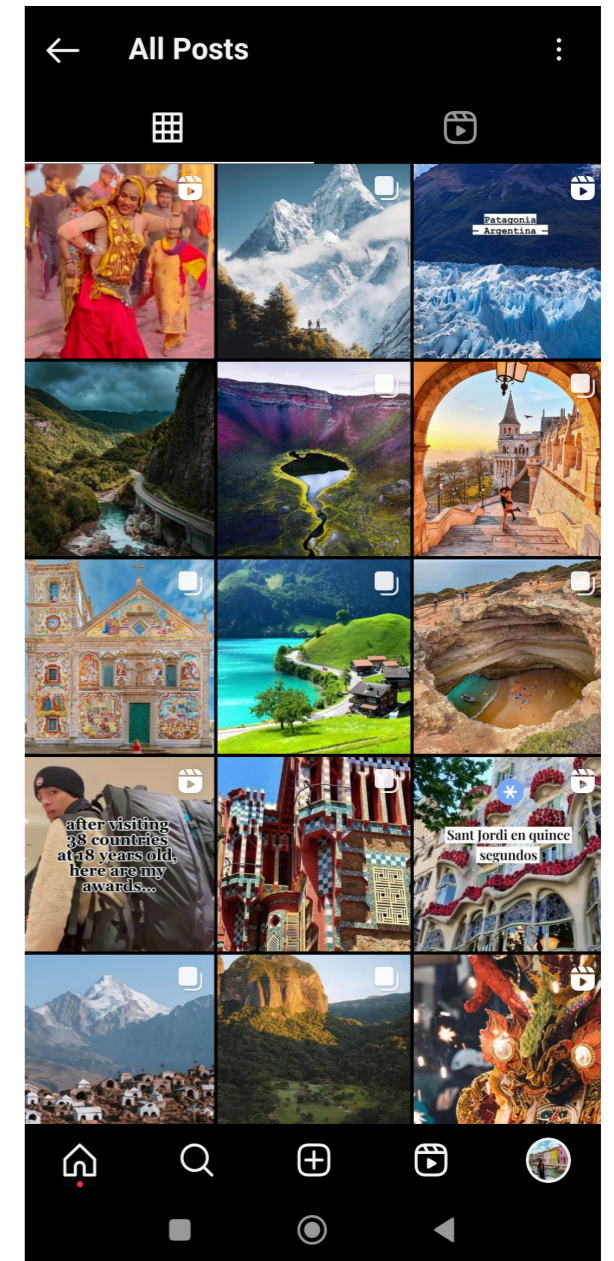


Fig 25. Instagram Saved Content , Travel Files.

“Information is a source of learning. But unless it is organized, processed, and available to the right people in a format for decision making, it is a burden, not a benefit.”

—William Pollard, American physicist

There is a transitory nature to our digital realm, but despite of that we could acknowledge the inherent potential that resides within the copious amount of saved content and the digital footprint we leave behind. This repository of preserved information encapsulates a wealth of valuable insights and experiences, awaiting harnessing and organization in a manner that can genuinely benefit us.

Traditionally, businesses have collected user data without always exhibiting full transparency regarding its utilization. However, what if we could establish a more direct and upfront data collection relationship lies in transparency? By clearly communicating to users that their social media data will be used for their direct benefit, individuals can make informed decisions regarding the sharing of their information.

This approach could foster trust and empower users to actively participate in the data collection process, offering them the choice to share their data in exchange for the personalized services they receive, specifically tailored travel suggestions.

Through conscientious curation and organization of our saved content, we are presented with an opportunity to construct a personalized knowledge base, serving as a powerful tool for personalization and enabling the leveraging of our own digital footprint to enhance our life experiences.



Fig 26. Instagram liked Content , Travel Related

In this proposal, where users collaborate with the final product to augment the value delivered, the co-creation of value becomes a crucial aspect. By contributing their personal data, users actively participate in shaping the personalized travel recommendations they receive. They become co-creators of value by offering insights into their preferences and contributing their data and trust. Advanced AI techniques then process their data to deliver highly personalized recommendations.

Recognizing the influential capacity of social media, I have explored the concept of utilizing this data to enhance personalized travel recommendations. The objective is to develop a practical and efficient tool that furnishes customized travel suggestions based on individuals' distinct interests and preferences. This amalgamation of technologies and data holds significant promise in creating valuable, user-centric solutions within the travel and tourism domain.

Fig 27. Social Media, Sara Kurfeß, Unsplash 2018.

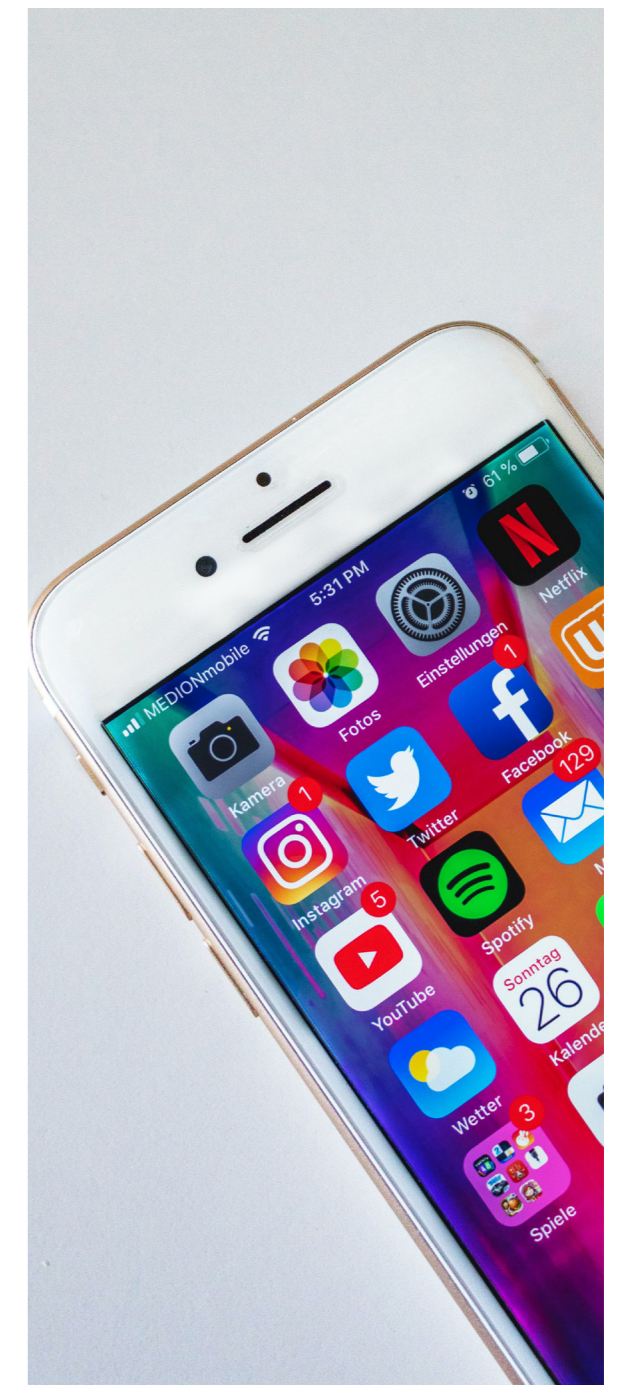




Fig 28. Jason Goodman
Unsplash 2019

7. Design Thinking

7.1. Empathy

In the quest to create a personalized travel app that caters to the unique preferences and needs of individual users, it is imperative to analyze the target audience, to understand their thinking and behavior. This understanding forms the foundation of the empathy phase in our design thinking process.

First, the target audience of this services were identified as generations Z and Millennials who are the first generations to grow up with technology at their fingertips, characterized as highly tech-savvy and comfortable using digital platforms and mobile apps. Amongst other peculiarities, they are heavily influenced by social media when it comes to travel decisions.

They actively engage with social media platforms like Instagram, TikTok, and YouTube to seek inspiration, gather travel information, and share their experiences, and finally they value personalized experiences. A profile of both generations and their expectations from digital services is created to better understand their needs.

Fig 29. Generation Y Profile, Inspiring Apps.

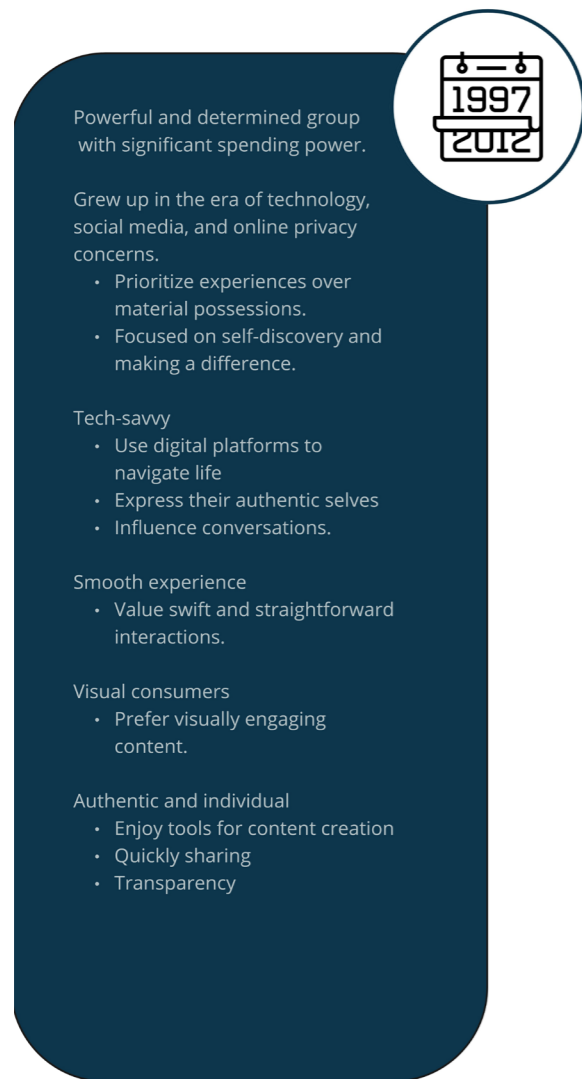
**1980
1996**

- Largest generational cohort worldwide**
 - Immense buying power
 - Value brands they love.
- Digital natives**
 - Rely on the internet for information and learning, and are heavily connected through social media.
- Prefer text messaging and digital communication**
 - Value work-life balance
 - Use platforms like Slack for collaboration.
- Prioritize experiences over material possessions**
 - Value digital products that enhance real-life experiences and provide flexibility and fun.
- Transparency is crucial**
 - Rely on ratings, reviews, and online forums
 - Make informed decisions
- Integrate technology into their lives**
 - Value quality of life
 - Control over their time and digital energy.
- Prioritize access over ownership**
 - Value flexibility
 - Prefer on-demand services

“Design thinking relies on our ability to be intuitive, to recognize patterns, to construct ideas that have emotional meaning as well as functionality, to express ourselves in media other than words or symbols.”

—Tim Brown, *Change by Design*

Fig 30. Generation Z Profile, Inspiring Apps.



Powerful and determined group with significant spending power.

Grew up in the era of technology, social media, and online privacy concerns.

- Prioritize experiences over material possessions.
- Focused on self-discovery and making a difference.

Tech-savvy

- Use digital platforms to navigate life
- Express their authentic selves
- Influence conversations.

Smooth experience

- Value swift and straightforward interactions.

Visual consumers

- Prefer visually engaging content.

Authentic and individual

- Enjoy tools for content creation
- Quickly sharing
- Transparency

User Interviews

Interviews were conducted to understand travelers' thought process during their travel planning phases, and the reasons why they chose their destination.

The sample was meant to include people from several backgrounds and nationalities within the age group the service is aimed for, which is millennials and Gen Z.

While there were inherent limitations of a sample predominantly composed of Bolivian participants, efforts have been made to justify and mitigate these biases. This includes the incorporation of additional data sources to understand the behavior of travelers from other nationalities.

The data from those interviews and from the research on other countries traveler profiles (Annex 5), confirmed the previous research done on motivations to travel. Every person interviewed or traveler profile had very particular motives and travel planning processes, depending on their interests and travel career.

For example, for those who lived in a country without ocean access, the most sought-after destinations were places with beaches and warm weather.

Those who were interested in music put festivals and concerts above all else. While some would rather pay for a travel agency service to not deal with the hassle of planning, many just go to social media for reference and do the planning themselves.

Most of the interviewed strongly rely on social proof for reference before purchasing or making a reservation, although some now mistrust social media due to the over-glamourized representation of travel.

Some suggested the idea of "Smart Recommendations" that could arise after data input, such as high and low budget options, festivities and events that will be happening during the dates of the trip or recommendations that consider all constraints (budget, time, preferences) or simultaneously.

Another interesting feature of value mentioned was the centralization of information, handy Qr codes for flights and reservations stored in one place, for easy access.

4.3. Travel Decision Making

“Your most unhappy customers are your greatest source of learning.”

– Bill Gates, American business magnate, investor, and philanthropist.

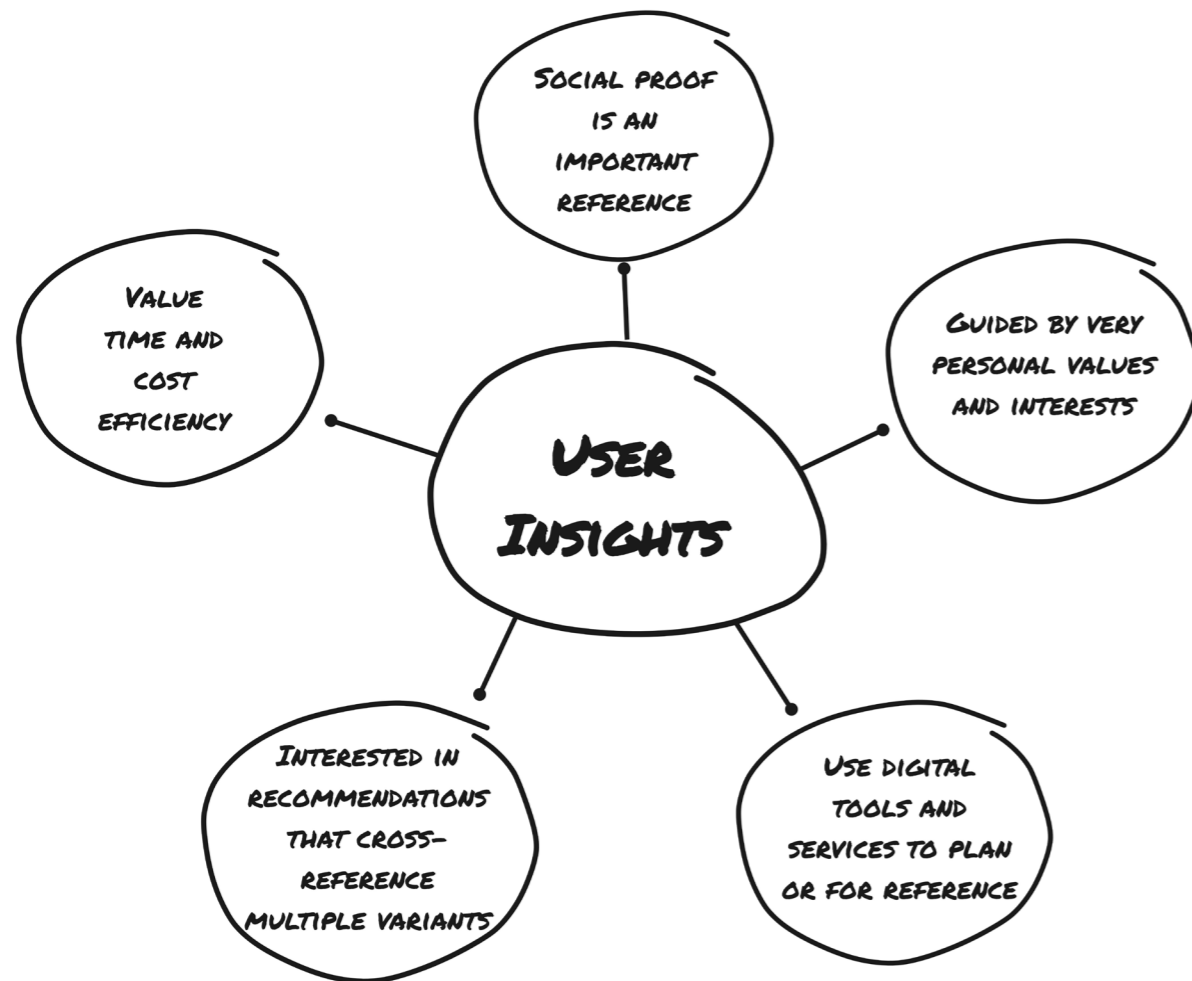


Fig 31. Interviews insight

7.2 Define

During this phase, all the information collected from the research and interviews is synthesized in a graphic manner to better understand user common characteristics, use patterns and challenges.

User Persona


A user persona is created as a fictional representation of the target audience, in this case millennials, where a personal story is included to bring the persona to life and illustrate their goals and challenges. User Persona helps us develop a deeper understanding of their characteristics, behaviors, needs, and motivations





Fig 32. Brooke Cagle Unsplash



Anna's vital statistics

 Anna is a 27 year old single female, living in New York, USA.

 Anna lives with her roommate (30) in a rented apartment, she has a dog and a hamster.

 Anna has a busy life as she works at a magazine while also volunteers on her spare time.

"I love traveling, but whenever I begin making plans I get a little overwhelmed with the amount of information that is out there. Tik tok is my biggest source of inspiration"

Anna · the traveler & trip planner

Anna's goals and needs

- She'd like to travel without the frustration of wasting time preparing something she's not really sure of, and lower expectations.
- She'd like some sort of assistant that could filter from friends advice and specialist in order to curate interesting options.
- She needs a tool that would make her planning process easier, help her choose, give her options that make sense to her personal profile

Anna's motivations

- Her main motivation is the desire to explore and see new places.
- She'd like get ideas of places to visit according to her budget and personal interests.
- She loves hiking and sightseeing, she's into cultural activities and enjoys trying authentic local cuisine

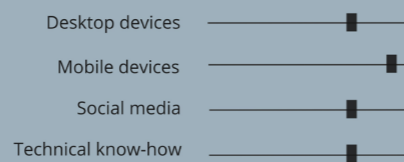
Anna's frustrations

- Anna feels like she doesn't have a lot of time to plan for vacations and ends up just choosing whatever is easiest.
- Many times she eventually goes back to the same places just to avoid the hassle of planning.
- Enjoys adventure and surprise, social media has made some destinations very repetitive for her.

Anna's everyday activities

- Wakes up early, walks her dog, does yoga, makes breakfast and goes to her office until 4pm.
- She works as an editor and writer for a magazine, where she coordinates and revises written material.
- After office she volunteers at a local nonprofit for women.
- In her spare time she goes hiking to Bear Mountain State Park with friends and takes her dog with her.

Anna's device and internet usage



Anna's notable quotes

- "I've tried using different planning tools but it is frustrating for me to have to jump from one to the other to plan one vacation"
- "I usually check people's reviews before committing to a hotel, museum or any other activity, I trust genuine opinions"
- "I watch Tik Toks and Travel vlogs, I usually save them and take notes on do's and don'ts for certain destinations"

Key Takeaways:

To effectively cater to millennial travelers like Anna, travel service providers should focus on providing unique and authentic experiences, leveraging technology and digital platforms, offering budget-friendly options, promoting sustainable practices, and fostering a sense of community and trust through user reviews and recommendations.

Fig 33. User Persona

Empathy Map

In the definition phase of design thinking, the empathy map serves as a valuable tool to understand and empathize with the users of a travel app. Its purpose is to gain deep insights into the thoughts, feelings, motivations, and behaviors of the app's target audience. By creating an empathy map, we can step into the shoes of the users, gaining a clearer understanding of their needs, desires, and pain points.

Important aspects identified are the role of social media, information overload, and choice paralysis.



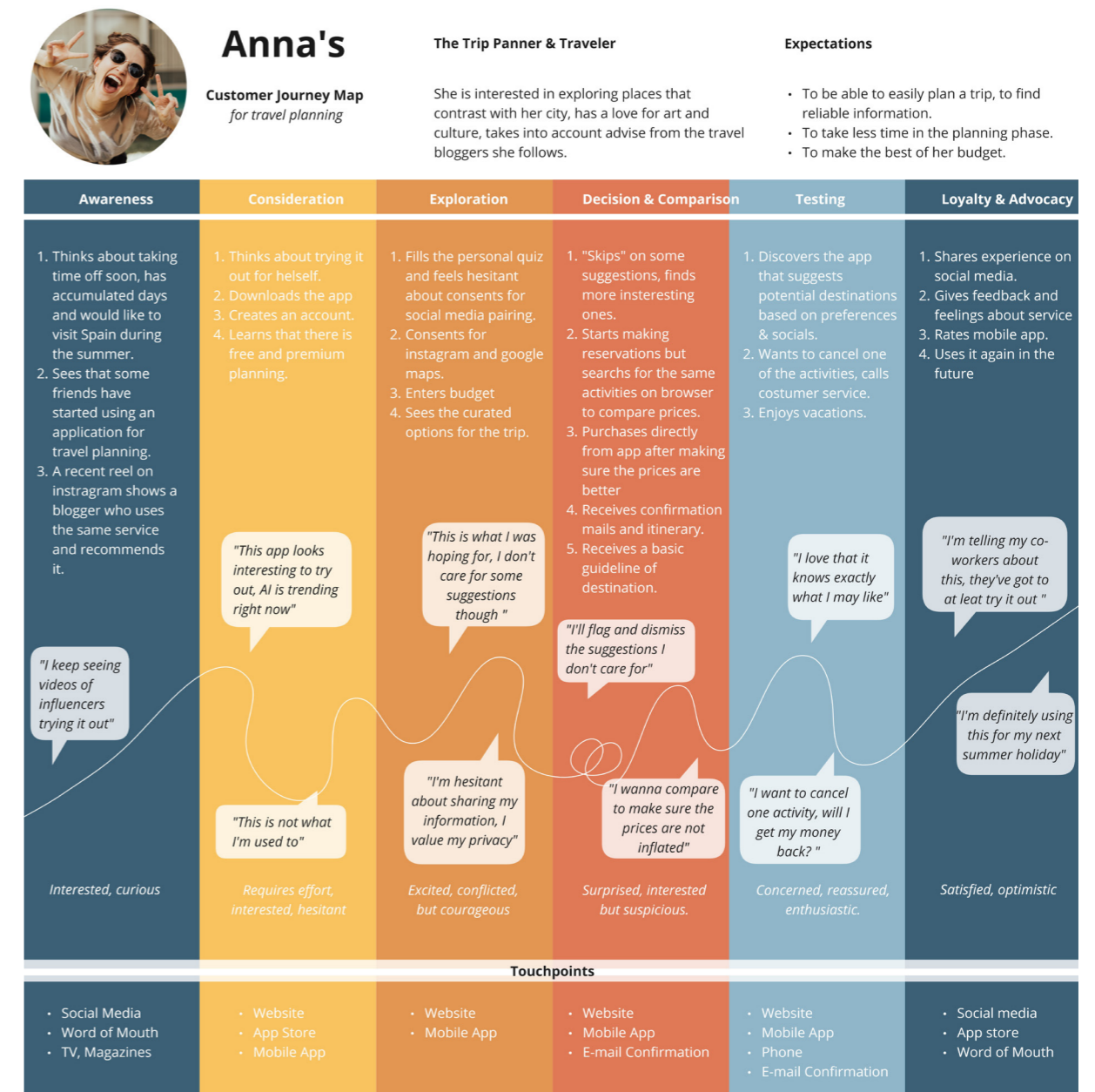
Fig 34. Empathy Map

Customer Journey Map

The customer journey map focuses on mapping out the actual steps and touchpoints of the user's interaction with the final value proposal, in a way acting as a bridge between the user understanding and user experience. This visual representation illustrates pain points, gaps, or opportunities for improvement within the user's journey. By visualizing the entire end-to-end experience, areas where user experience falls short are identified.

Some important points are apprehension about new technology, privacy concerns, price convenience concerns, personalization capacity.

Fig 35. Customer Journey Map



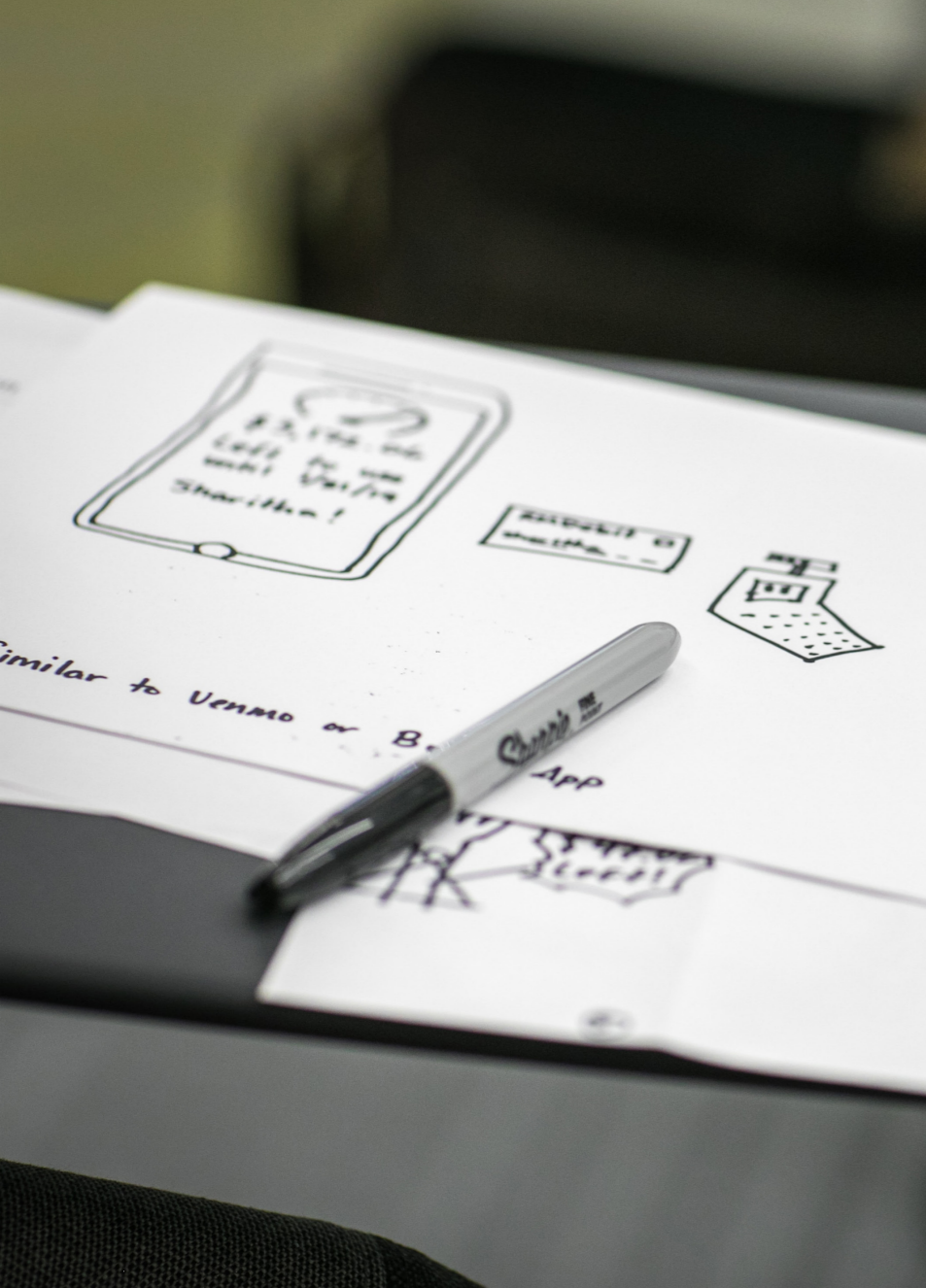


Fig 36. Jason Coudriet
Unsplash, 2018

8. The proposal

8.1. Ideation

During the ideation phase of the project, I engaged in a creative and exploratory process to generate innovative ideas and possibilities for the travel app. One of the techniques I employed was the SCAMPER method.

Using SCAMPER, I thoroughly evaluated each element of the existing travel planning journey and identified opportunities for improvement and disruption. I explored various ideas for substitution, such as replacing traditional booking methods with alternative options like peer-to-peer accommodations or blockchain-based systems. I also considered combining functionalities to create a more seamless and integrated experience, leveraging emerging technologies such as artificial intelligence.

*“The best way to create value in the 21st Century is to connect
Creativity with Technology”*

—Steve Jobs, business magnate, inventor, and investor.

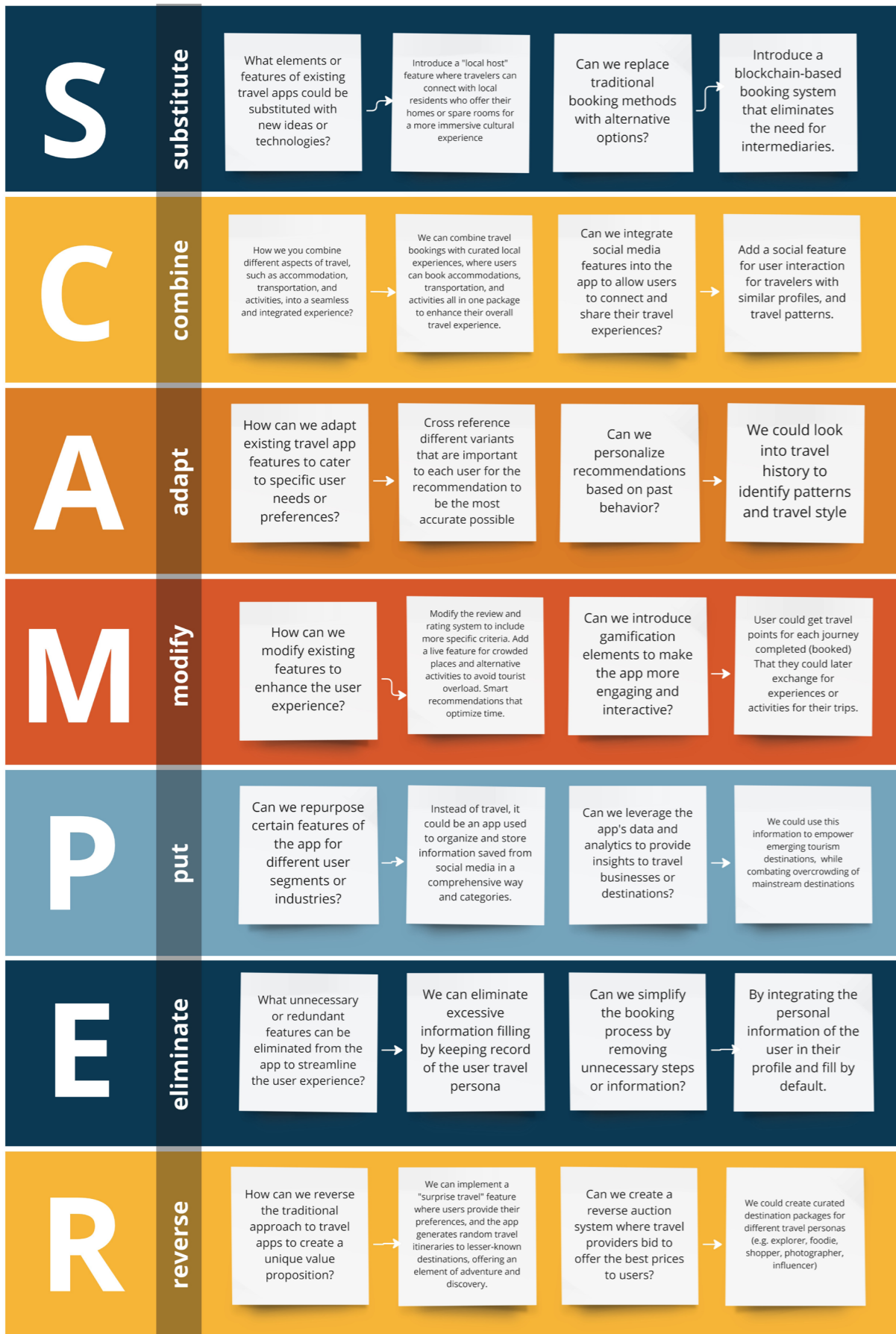


Fig 37. Scamper method for ideation

Throughout the ideation process, I explored various iterations of the potential functions the travel app could offer.

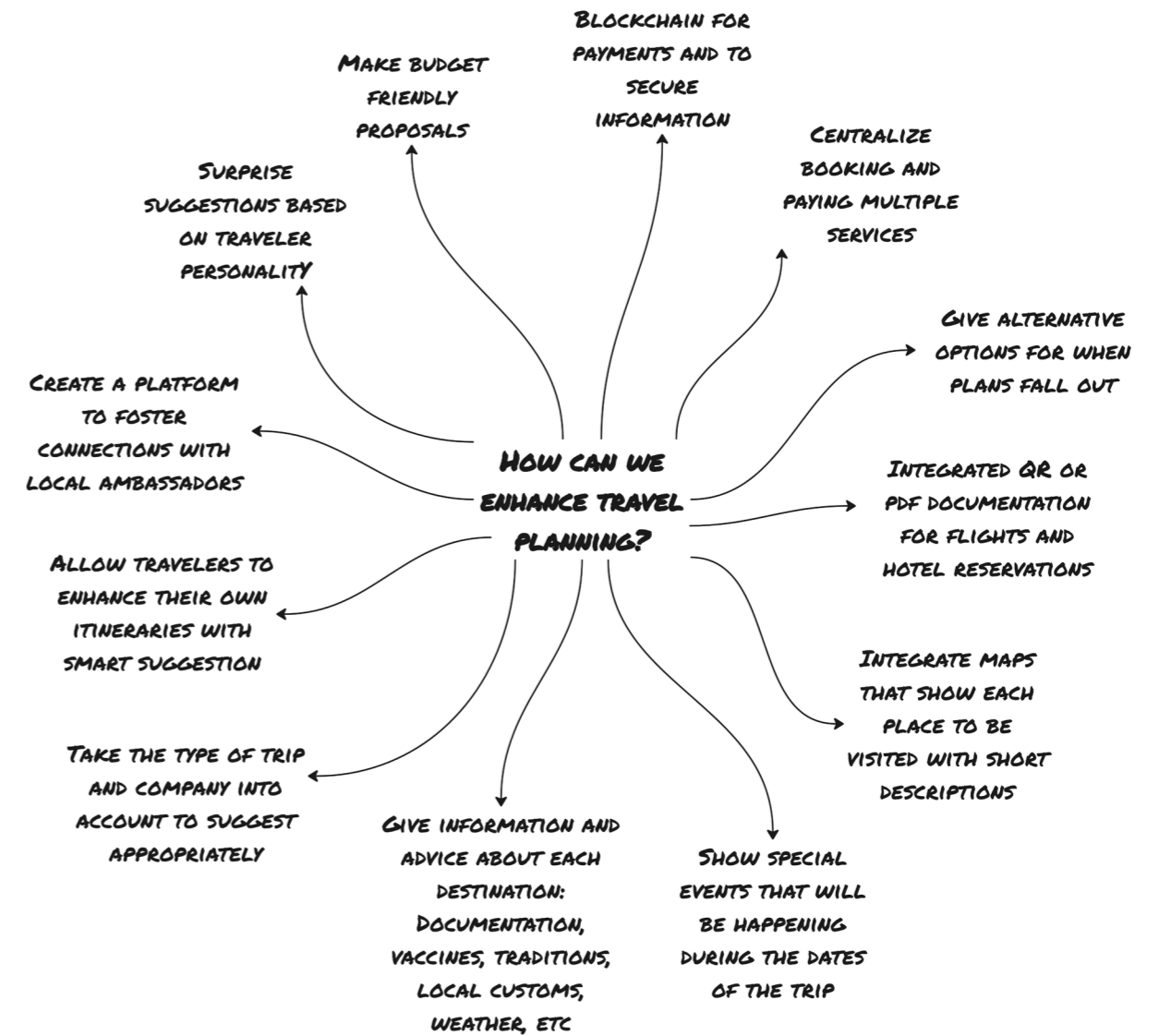


Fig 38. Ideation mind map

Then the questions that came up were: What exactly is the app? What role does it play in the travel journey of our users? Could it be more than just a tool? In a way it acts as an ally, an assistant, a digital travel companion that understands and caters to the unique needs and preferences of our users.

Drawing inspiration from the metaphorical potential, the aim is to create experiences that go beyond traditional travel planning methods.

- **As an ally:** the service could provide unwavering support throughout the entire travel journey. It offers guidance, recommendations, and solutions to the challenges faced by travelers. It becomes a reliable partner, ensuring that every step, from destination selection to itinerary planning, is seamless and enjoyable.

- **As an assistant:** the service could take on the role of a helpful travel companion. It assists users with various tasks, such as booking accommodations, finding local attractions, and suggesting personalized itineraries. With intuitive interface and intelligent algorithms, it can simplify the complexities of travel planning, making it effortless and enjoyable.

- **As digital travel agent:** It could leverage its vast knowledge base and user data to provide tailored recommendations and suggestions. By understanding users' preferences, past travel experiences, and interests, it offers personalized suggestions for destinations, activities, and hidden gems, creating a truly customized travel experience.

- **As a friend:** a trusted confidant who knows users intimately. It draws on its knowledge of users' preferences, digital trail, previous trips, and social connections to offer recommendations that resonate on a personal level. It becomes a friend who shares their wisdom, insights, and experiences, creating a sense of familiarity and trust.

8.2 Prototyping

“If a picture is worth a thousand words, a prototype is worth a thousand meetings”

– IDEO.org

The technology behind

During the prototyping phase of the project, my focus shifted towards exploring the most suitable AI techniques that could be applied to enhance the functionality and user experience of our travel app. Recognizing the potential of AI in revolutionizing the way travelers plan their trips, I embarked on a research journey to identify the AI techniques that align with our project goals.

With an emphasis on personalization, recommendation systems, and intelligent data processing, I delved into various AI methodologies such as machine learning, natural language processing, and data analytics.

- Data Collection
- Data Preprocessing
- NLP Techniques
- Supervised Machine Learning
- Feature Engineering
- Model Training
- Collaborative Filtering
- Personalized Travel Recommendations.
- User Interface and Interaction

However, it is important to acknowledge that despite the comprehensive research and understanding gained during the research phase, the actual implementation and development of these AI techniques require a deep level of expertise in coding and database management. It becomes evident that the execution of the envisioned AI-powered features and functionalities will require the collaboration and involvement of skilled developers and data specialists.

A detailed graphic about the steps to develop the project in terms of the basics is presented in a step-by-step manner for easier understanding about what every phase entails. And a rough algorithm is presented in a very simplified version of what a fully-fledged system would entail. However, it serves as a proof of concept and provides a starting point for further refinement and optimization. It allows us to understand the potential of using algorithms to enhance the travel planning process, guiding users towards personalized and memorable experiences. (Annex 6)

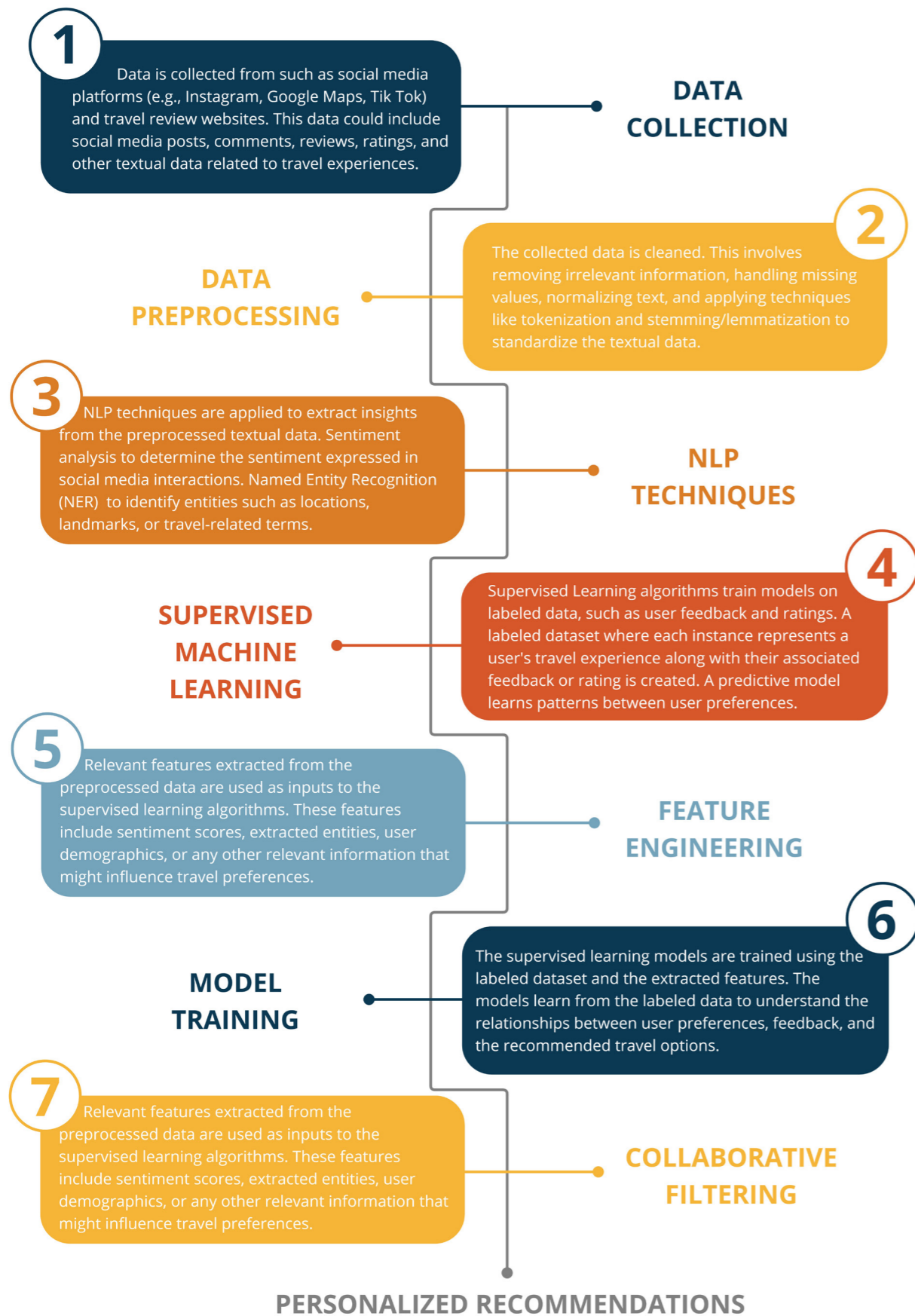


Fig 39. Step by step for AI-powered app design.

Business Model

As we move into the next phase of development for our travel app, it is crucial to establish a solid business model that aligns with our vision and objectives. The business model serves as the framework for how we generate revenue, deliver value to our users, and sustain the growth and success of our app.

To support this ambitious goal, we have carefully crafted a comprehensive business model that encompasses various elements of the travel industry ecosystem.

At its core, our business model revolves around a subscription-based approach, providing users with access to premium features and exclusive content for a recurring fee. This model allows us to establish a stable revenue stream while ensuring that our users receive exceptional value and benefits in return.

In addition to the subscription model, we will also leverage strategic partnerships with travel service providers, such as airlines, hotels, and local experiences, to offer seamless booking and reservation options directly through our app. These partnerships not only enhance the user experience but also provide opportunities for generating additional revenue through commission-based arrangements.

A business model canvas is sketched to understand the way this service could provide value while also being profitable.

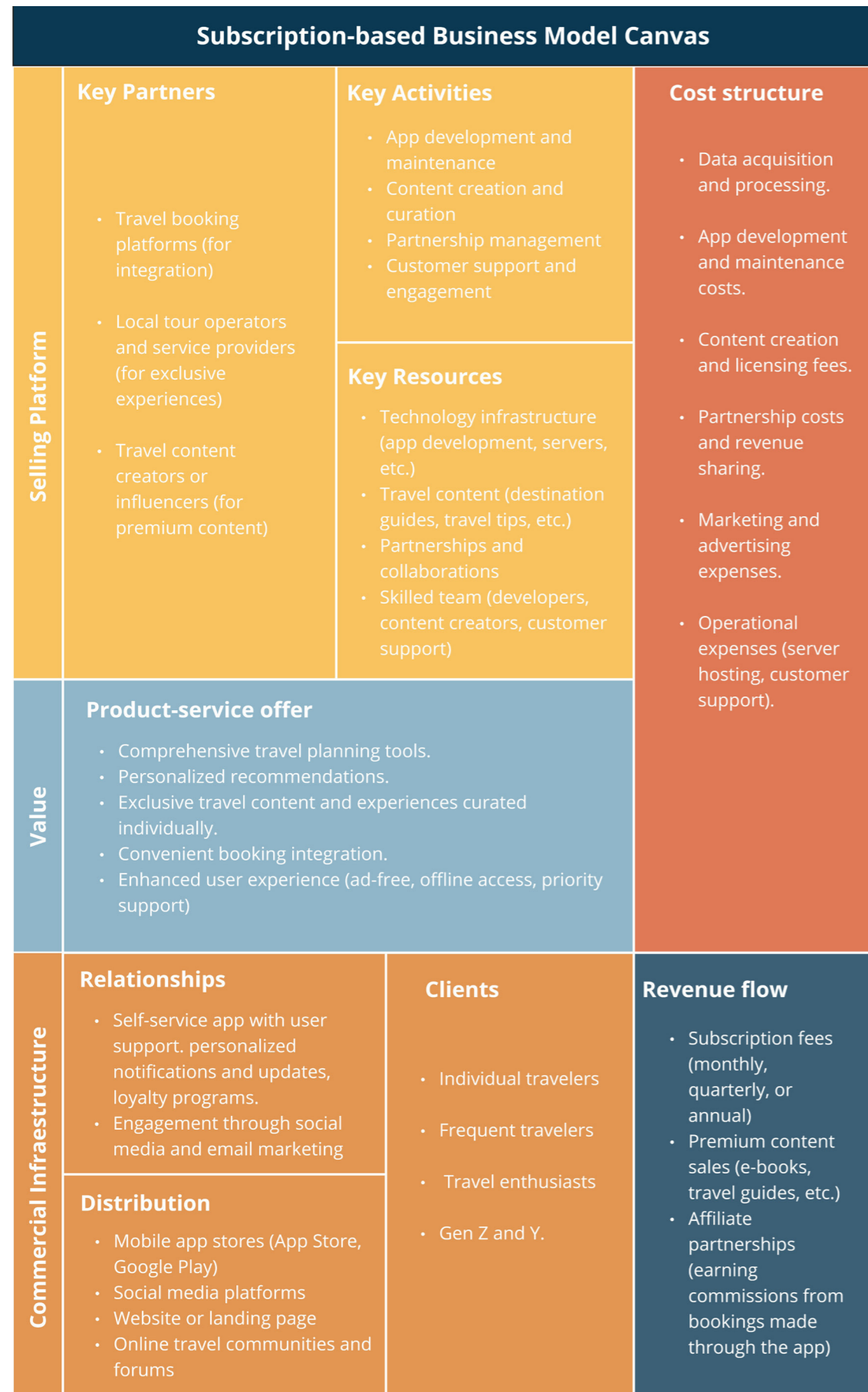


Fig 34. Business Model

Information Architecture

To ensure a seamless and intuitive user experience, the information architecture of the app is carefully crafted. This involves organizing and structuring the app's content and features in a logical and user-friendly manner. By categorizing destinations, accommodations, transportation options, and activities, I aim to make it easier for users to navigate and find relevant information.

The information architecture of this travel app is designed to ensure that users can navigate and find the information they need effortlessly. It involves organizing various components in a logical and intuitive manner. Each category is further divided into sub-categories to provide a comprehensive and organized hierarchy.

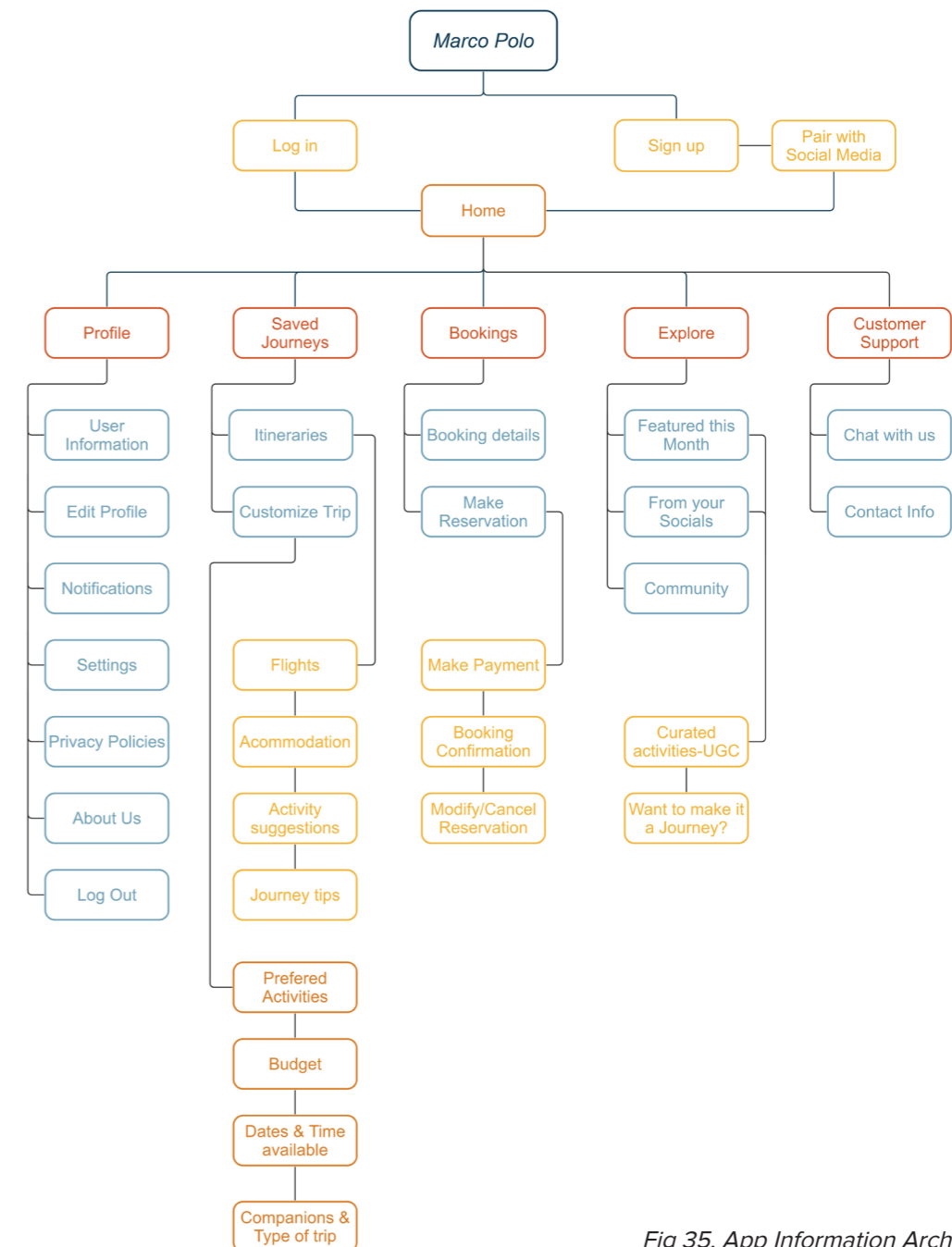


Fig 35. App Information Architecture

User flowchart

Focused on designing the user experience and functionality, a user flowchart that outlines the step-by-step journey users will take within the app is created.

This flowchart serves as a visual representation of the app's screens, features, and functionalities, illustrating the sequence of actions users are expected to perform. Starting from the landing page, users will be guided through different paths, such as exploring destinations, searching for accommodations, and discovering activities.

The top priorities of the project are privacy measures and data protection, a smooth and intuitive path for the users to dive through the user interface and carefully organize preference filters that will result into more accurate destination suggestions.

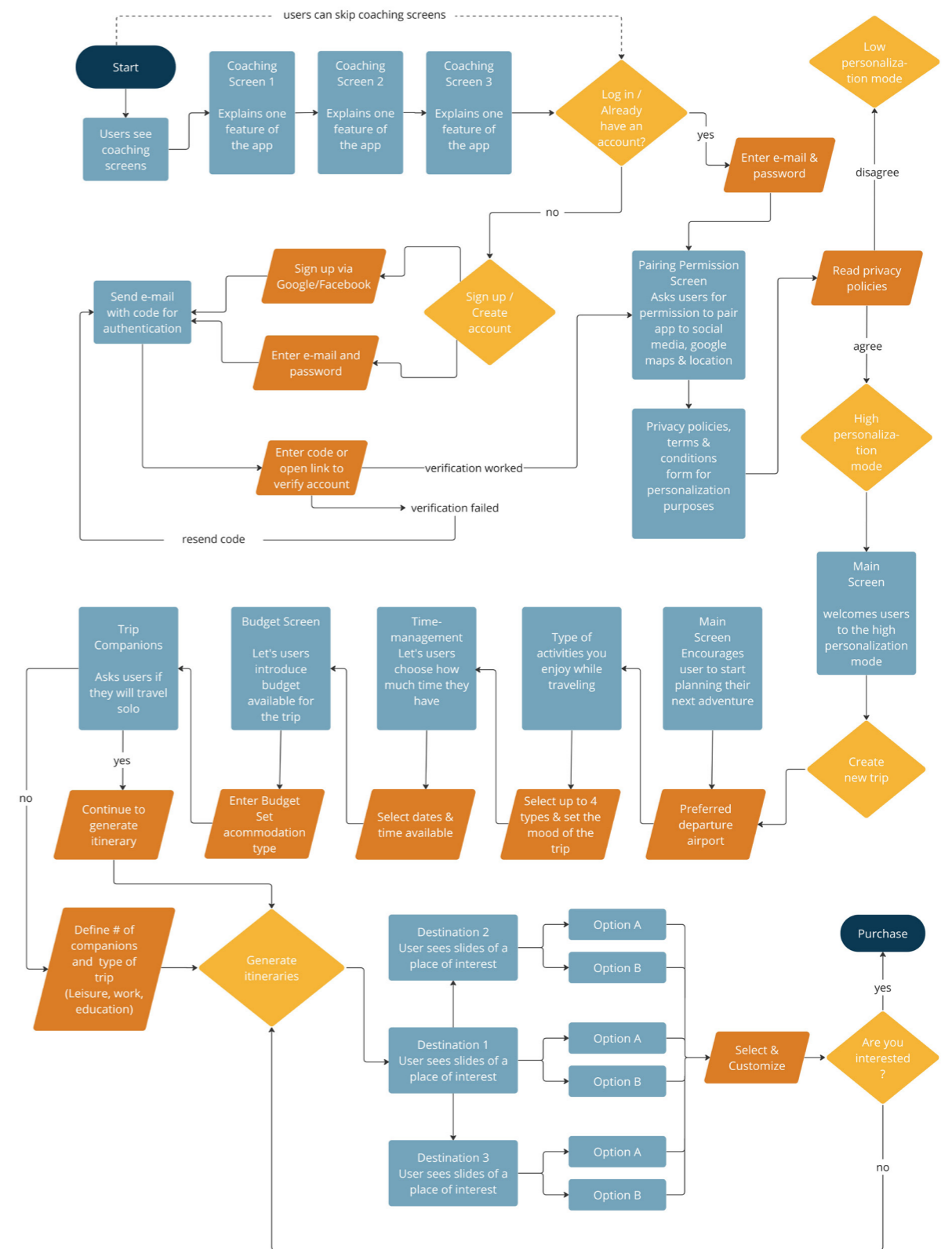


Fig 36. User Flowchart

Branding

In addition to the functional and technical considerations of the app development, careful thought to the branding aspect is crucial. A key element of any successful app is its ability to establish a strong and memorable brand identity that resonates with its target audience. For this app, I have chosen the name “Marco Polo” to capture the essence of exploration, discovery, and adventure. (Annex 7)

The name “Marco Polo” holds historical significance, evoking images of ancient journeys and cross-cultural encounters. It carries a sense of curiosity, wanderlust, and the spirit of adventure that aligns perfectly with the app’s purpose of facilitating travel planning and discovery. By leveraging the name Marco Polo, the app immediately taps into the emotional connection and aspirations associated with exploration.

The branding extends beyond just the name. I have also developed a distinctive logo and visual identity for the app. The logo features a stylized compass symbol, symbolizing direction and navigation. The choice of colors, typography, and graphic elements within the app’s interface are carefully curated to evoke a sense of wanderlust, modernity, and trustworthiness.

Furthermore, the app’s tone of voice and messaging align with the brand identity. The language used in app notifications, descriptions, and user interactions is friendly, informative, and inspiring. The aim is to create a connection with users and convey the app’s dedication to providing exceptional travel experiences. The branding aspect enhances the overall user experience by conveying a sense of trust, reliability, and excitement, thereby fostering a deeper connection between users and the app.

Marco Polo

DISCOVER A WORLD MADE JUST FOR YOU



Fig 37. Marco Polo Branding



Fig 38. Marco Polo Moodboard

App Design Elements

Typography System - Lato

Display

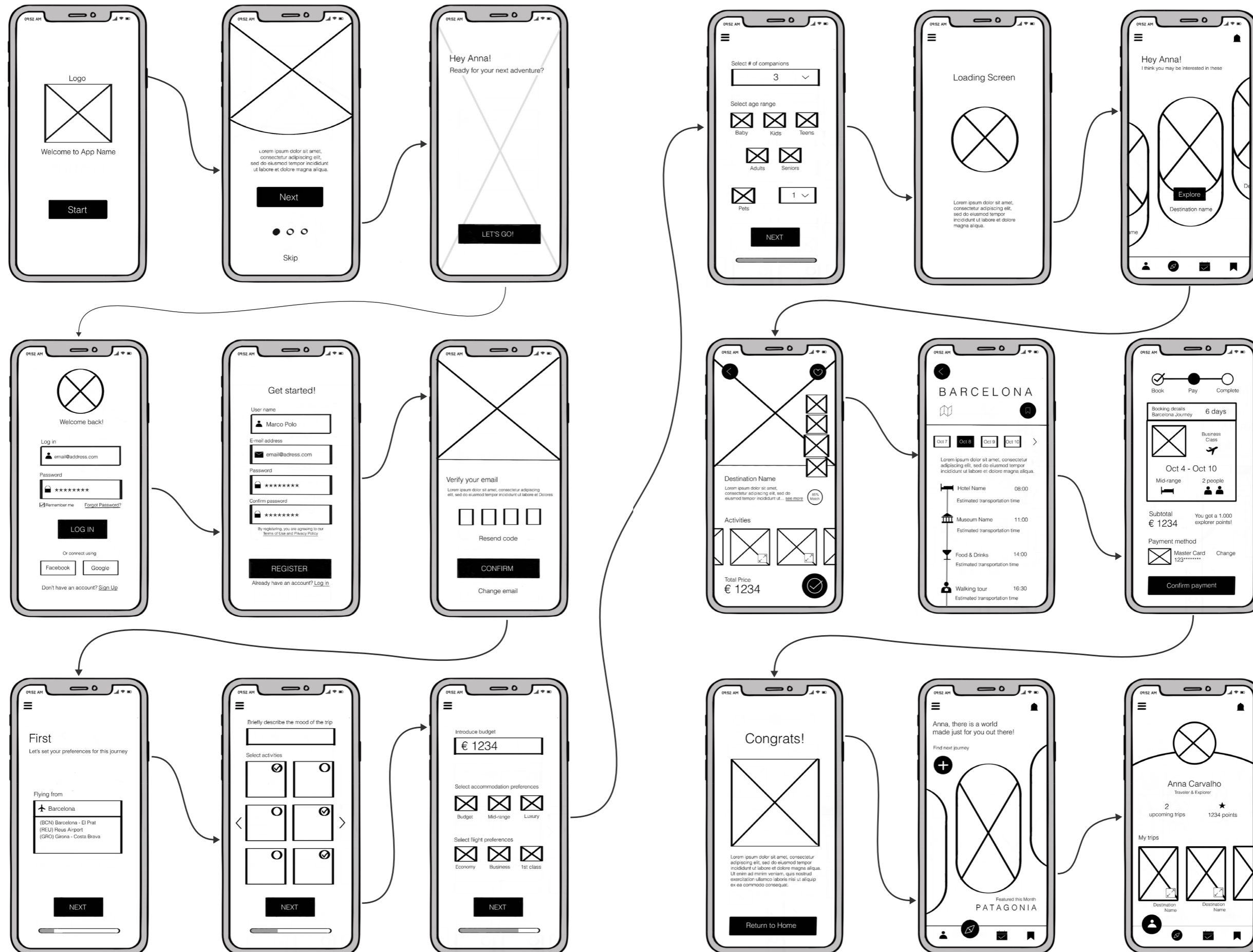
Display 01 Light	Display 01 Semi Bold	Display 01 Bold	Display 01 Extra Bold
Display 02 Light	Display 02 Semi Bold	Display 02 Bold	Display 02 Extra Bold
	Default	Hover	Active
Primary Button	Button	Button	Button
Secondary Button	Button	Button	Button
Ghost Button	Button	Button	Button
Only Text Button	Button	Button	Button

Low fidelity wireframes

An essential step in the prototyping phase is the creation of low fidelity wireframes. Low-fidelity wireframes are simplified, basic representations of the app's interface and layout, devoid of detailed visual elements and colors. While they may appear crude at first glance, these wireframes served a crucial purpose in the design process.

The primary objective of low-fidelity wireframes is to outline the structural and functional aspects of the app's user interface. They provide a visual framework that allows me to focus on the app's overall layout, content placement, and interaction flow without getting distracted by visual aesthetics. By stripping away unnecessary details, I can concentrate on the core functionalities and usability of the app.

Fig 39. Wireframes

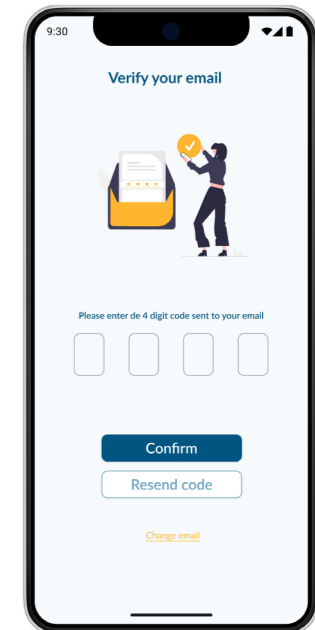
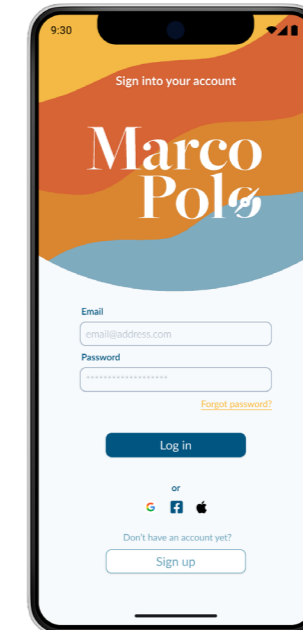
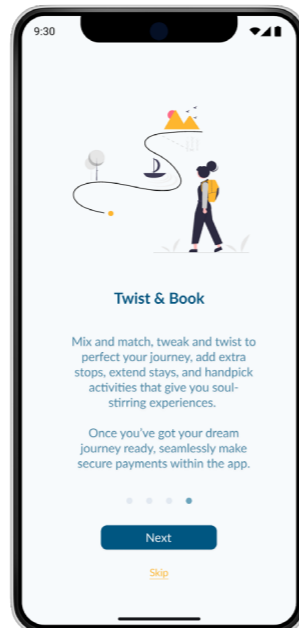
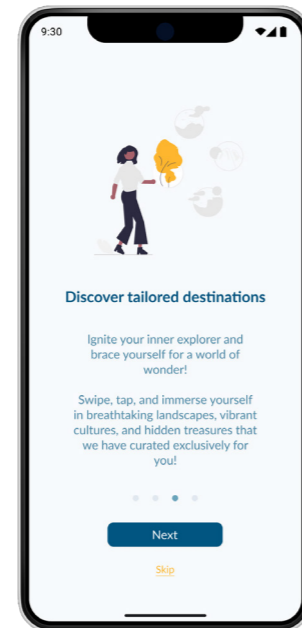
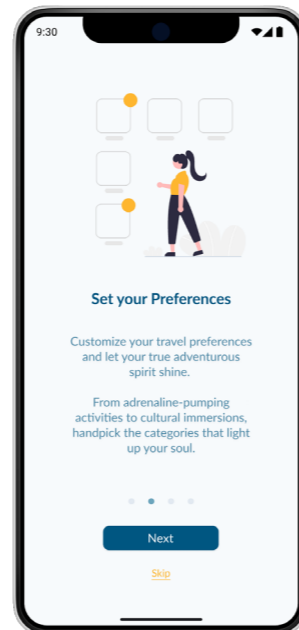
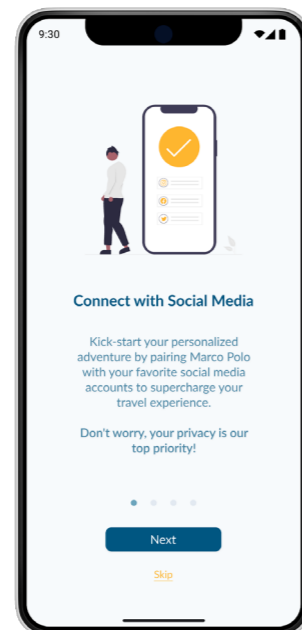


Final Proposal



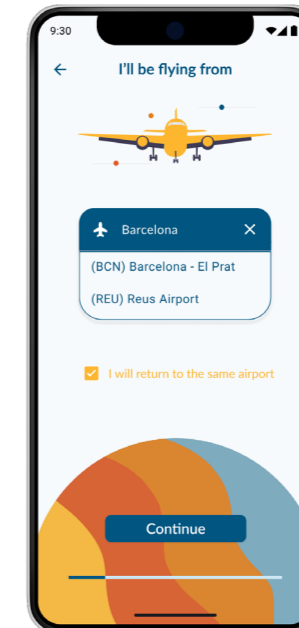
A mobile application that shows travelers a tailored world fit to their liking and personality.

The welcome screen presents the main idea of the service, while the other four coaching screens explain the basic steps they must follow in order to get curated travel suggestions.



The screens above asking for two step verification to ensure account protection.

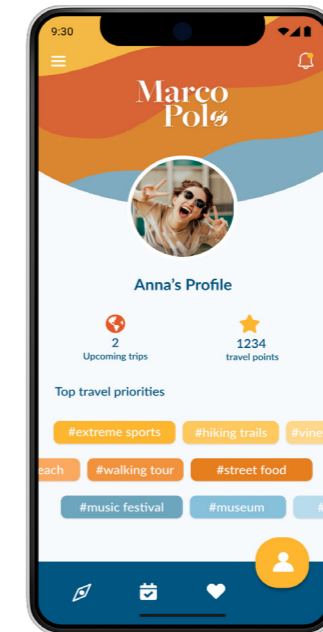
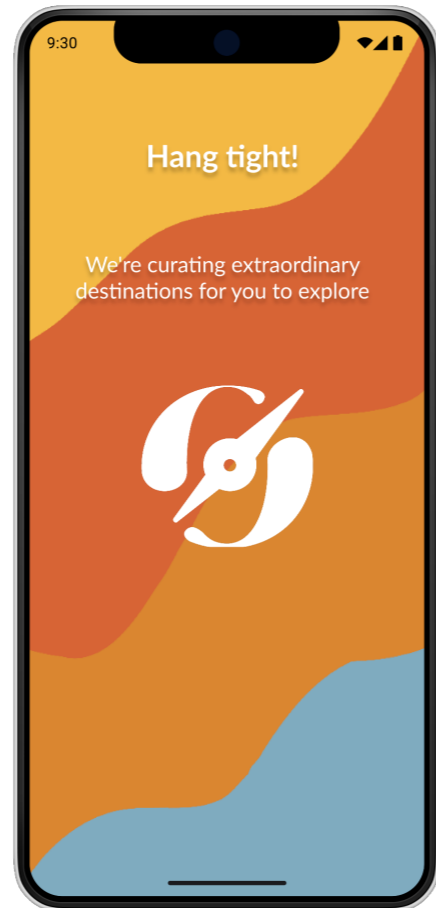
Social pairing screen, where users get to choose which social media they want to pair with the app. Placing a high importance in privacy, they must first read and agree to the privacy details.



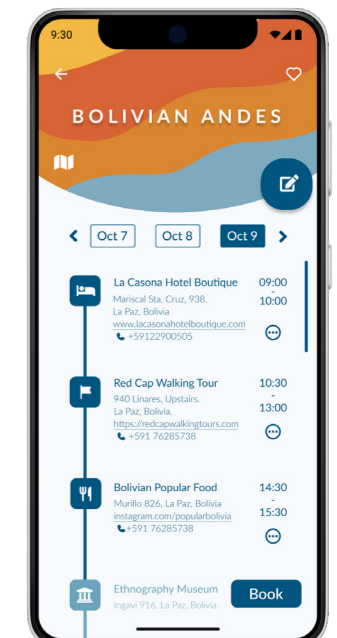
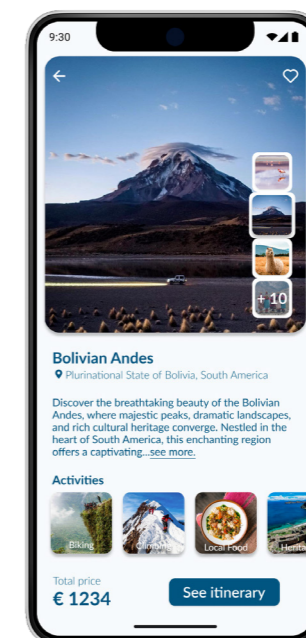
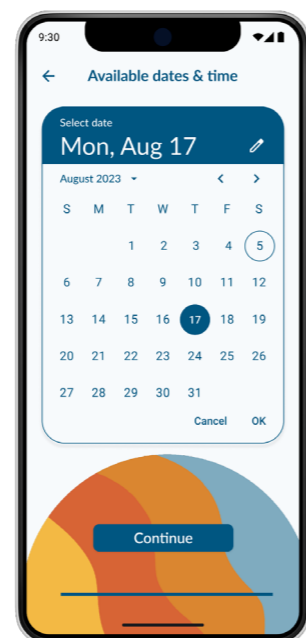
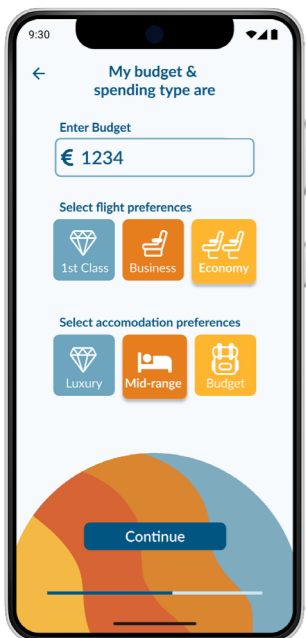
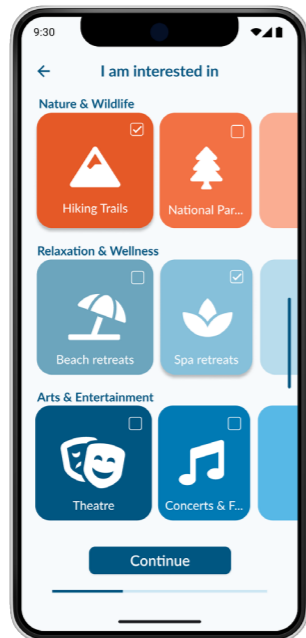
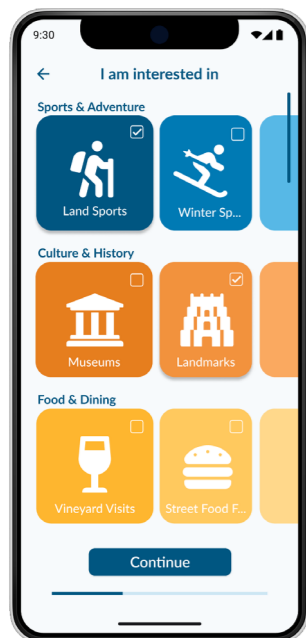
Figures 40 through 43. Prototype

Personalization screens, that fit each different type of trip, amongst the filters are interests, budget, time available, type of accommodation and flight preference and companions.

Later a loading screen while the app elaborates the travel proposals.



The home screen presents potential destinations that could be of interest for the user, based on their travel behavior, history and digital trail, where they can save for later or simply like. Once they choose, an elaborated proposal is developed and presented that they can also tailor to their liking as it automatically suggests replacements.



8.3 Testing

“I think test-driven design is great. But you can test all you want and if you don’t know how to approach the problem, you’re not going to get a solution.”

– Peter Norvig, computer scientist and education fellow at Stanford Institute for Human-Centered AI.

While the ideal design thinking process involves thorough testing and iteration of prototypes to gather user feedback and refine the product, time constraints and limited knowledge in data processing, coding, and the required back-end development and AI technology, have limited the scope of this project, preventing the inclusion of a dedicated testing phase.

While the basic outline of the personalized travel app based on social media footprint has been established, the absence of the necessary technical expertise hinders the ability to fully implement and test the solution.

The development of a robust back-end infrastructure, encompassing data collection, storage, analysis, and recommendation generation, requires specialized skills and knowledge in areas such as database management, algorithm development, and machine learning. process would allow for the identificati

These technical components are essential for accurately processing social media footprints, extracting relevant information, and delivering personalized travel recommendations. In a typical testing phase, prototypes would be developed and presented to target users, who would provide valuable feedback through observations, interviews, and usability tests.

This iterative process would allow for the identification of potential issues, user preferences, and areas for improvement, ultimately leading to a more refined and user-centric design.

However, given the limitations, the focus of this thesis has been on the earlier stages of the design thinking process, such as research, empathy, and ideation. These stages have provided valuable insights into the user needs, motivations, and desired features, which have resulted in the design of a mobile application user interface.



Fig 44. Faizur Rehman
Unsplash, 2021

CONCLUSIONS



Fig. 45 Clay Banks
Unsplash, 2017

“Though we see the same world, we see it through different eyes.”

—Virginia Woolf, writer.

9. Final Comments

In addition to its direct implications for personalization of travel experiences, this project could open a broader discussion on the potential for data cross-collaboration and co-creation of value in various fields.

The concept of personalization, when implemented with explicit and transparent consent, has the potential to revolutionize industries beyond travel. By leveraging social media footprints and user-generated data, organizations can gain valuable insights into individual preferences, behaviors, and aspirations.

This data-driven approach allows for the creation of tailored experiences, products, and services that meet the unique needs of everyone.

Involving users throughout the design process of their experiences, and incorporating their insights fosters a sense of ownership and ensures that the final product aligns with their expectations and aspirations.

This co-creation approach empowers users, transforms them from passive consumers to active participants, and enhances their overall user experience.

However, it is crucial to emphasize the importance of explicit consent and transparency when dealing with personal data. Respecting privacy and ensuring that users have control over the information shared is paramount in establishing trust and maintaining ethical practices.

10. Bibliography

“What Is Artificial Intelligence?” (n.d.) IBM. <https://www.ibm.com/topics/artificial-intelligence>

“Definition of Intelligence”, n.d. Merriam-Webster Dictionary <https://www.merriam-webster.com/dictionary/intelligence>
“What is Machine Learning” n.d. IBM <https://www.ibm.com/topics/machine-learning>

Baheti, Pragati (August, 2021) “A Simple Guide to Data Preprocessing in Machine Learning” V7 <https://www.v7labs.com/blog/data-preprocessing-guide#h3>

Blue, Juanita, Joan Condell, & Tom Lunney. «Digital Footprints: Your Unique Identity», 2018. <https://doi.org/10.14236/ewic/HCI2018.173>.

Brown, Sara (April 21, 2021) “Machine learning, explained” MIT. <https://mitsloan.mit.edu/ideas-made-to-matter/machine-learning-explained#:~:text=What%20is%20machine%20learning%3F,to%20how%20humans%20solve%20problems.>

Bulchand-Gidumal, J. (2020). “Impact of artificial intelligence in travel, tourism, and hospitality” Handbook of E-Tourism, 1–20, Springer.

Claremont Mckenna College (2017) “The Paradox of Choice, Barry Schwartz” [Video]. YouTube, <https://www.youtube.com/watch?v=yhtmhaboE94&t=198s>

Jiang, Shan. “Exploring Experience and Motivation Using Means-End Chain Theory”. Research Gate, November 2019. <https://doi.org/10.1079/9781786391896.0053>

Kavlakoglu, Eva (May, 2020) “AI vs. Machine Learning vs. Deep Learning vs. Neural Networks: What’s the Difference?” <https://www.ibm.com/cloud/blog/ai-vs-machine-learning-vs-deep-learning-vs-neural-networks>

Kononova, Olga, Dmitry Prokudin, & Elena Tupikina. «From e-Tourism to Digital Tourism. Terminologically Review». Saint-Petersburg National Research University of Information Technology, Mechanics and Optics, 2020.

L. Ceci. “Hours of video uploaded to YouTube every minute 2007-2022”, Statista, 2023. <https://www.statista.com/statistics/259477/hours-of-video-uploaded-to-youtube-every-minute/#:~:text=As%20of%20June%202022%2C%20more,for%20online%20video%20has%20grown.>

Lanckbeen, C. (2023, April 24). “Post-COVID ‘revenge travel’ has gone big. And the revenge is sweet” EuroNews <https://www.euronews.com/2023/04/21/post-covid-revenge-travel-has-gone-big-and-the-revenge-is-sweet>

Levin, Ilya, & Mamlok. «Culture and Society in the Digital Age». Information 2021 12, n. 68 (February 2021). <https://doi.org/10.3390/info12020068>

Liu, Yang, & Andrew Simpson. «On the Trade-Off Between Privacy and Utility in Mobile Services: A Qualitative Study». Lecture Notes in Computer Science, 2020, 261-78. https://doi.org/10.1007/978-3-030-42048-2_17

Morgan, B. (2022, Jun 27). “What Is Bleisure Travel, And How Is It Transforming The Hospitality Industry?” Forbes. <https://www.forbes.com/sites/blakemorgan/2022/06/27/what-is-bleisure-travel-and-how-is-it-transforming-the-hospitality-industry/>

Papaioannou, Thanos, Aggeliki Tsohou, & Maria Karyda. «Shaping Digital Identities in Social Networks: Data Elements and the Role of Privacy Concerns». Lecture Notes in Computer Science, 2020, 159-80. <https://doi.org/10.1007/978-3-030-42048-2.>

Schmidt, Eric & Jared Cohen. «The New Digital Age, Reshaping the Future of People, Nations and Business», 2013. <https://doi.org/10.1177/1018529120150208>

Uzelac, Aleksandra, & Biserka Cvjetičanin. Digital Culture: Changing Dynamics. Culturelink Joint Publications 12. Zagreb: Institute for International Relations, 2008.

Vorobiova, Anna. «The Digital Age: The Era We All Are Living In». Software Engineering. Development Zone, June 2022. <https://dzone.com/articles/the-digital-age-the-era-we-all-are-living-in-and-d.>

What Is Machine Learning (ML)? (June 26, 2020) UC Berkeley. <https://ischoolonline.berkeley.edu/blog/what-is-machine-learning/>

Cover Marek Piwnicki, Unsplash, 2021
Fig 1. Social Cut, Unsplash
Fig 2. Creative Christians, Unsplash 2020
Fig 3. Card Mapr, Unsplash 2020
Fig 4. Mika Baumeist 2022
Fig 5. Stem T4L Unsplash 2019
Fig 7 .Andrea De Santis, Unsplash 2020
Figure 8. Kavlakoglu, Eva (May, 2020) “AI vs. Machine Learning vs. Deep Learning vs. Neural Networks: What’s the Difference?”
Figure 9. Nielsen, Michael (December 2019) “Why are Neural Networks hard to train?”
Figure 10. Karnes, KC (2019) “Introduction to (NLP)
Figure 11. Baheti. 2021. “A Simple Guide to Data Preprocessing in Machine Learning”
Figure 12. Cser, Tamas (2018) Is AI Good for Society? - The Good, The Bad & The Ugly
Fig 13 . EV, Unsplash 2018
Fig 14 . Karsten Winegeart, Unsplash , 2021
Fig 15. Cocktail Party Effect, Media Production Lab, EdTech, University of Toronto
Fig 16. Fikri Rasyid, Unsplash 2018
Figures 17 & 18. Travel GPT, 2022
Fig 19. iplan.Ai , 2022.
Figures 20 & 21. TripNotes, 2022.
Figures 22 & 23. The Trip Boutique, 2022.
Fig 24. Tom Barret Unsplash 2017
Fig 25. Instagram Saved Content , Travel Files.
Fig 26. Instagram liked Content , Travel Related
Fig 27. Social Media, Sara Kurfeß, Unsplash 2018.
Fig 28. Jason Goodman Unsplash 2019
Fig 29. Generation Y Profile, Inspiring Apps.
Fig 30. Generation Z Profile, Inspiring Apps.
Fig 31. Interviews insight
Fig 32. Brooke Cagle Unsplash
Fig 33. User Persona
Fig 34. Empathy Map
Fig 35. Customer Journey Map
Fig 36. Jason Coudriet Unsplash, 2018
Fig 37. Scamper method for ideation
Fig 38. Ideation mind map
Fig 39. Step by step for AI-powered app design.
Fig 34. Business Model
Fig 35. App Information Architecture
Fig 36. User Flowchart
Fig 37. Marco Polo Branding
Fig 38. Marco Polo Moodboard
Figures 40 through 43. Prototype
Fig 44. Faizur Rehman, Unsplash, 2021
Fig. 45 Clay Banks, Unsplash, 2017

10. Annex

Annex 1 – Smart Tourism definitions

Definition of the concept	Author/Year
Employing of mobile digital connectivity to create more intelligent, meaningful and sustainable connections between tourists and the destination; a form of deep civic engagement, and not just as a simple form of consumption.	J.G. Molz, 2012
Clean, eco-friendly, ethical and high-quality services offered at all levels of the service chain	UNWTO, 2012
The comprehensively maximizing environmental, cultural, social and economic values through IT - the Internet of Things, cloud computing, GIS, virtual reality and the mobile Internet.	Sjaocjan' K. 2016
A combined model of the developing tourism industry and innovative technology	
An individual tourist support system within the context of information services and an all-encompassing technology	Yu. Li et al. 2017
Ubiquitous tour information service provided to tourists, not tourist groups, received by tourists during the tourist process anytime, anywhere and based on the individual needs of people;	
The ease with which users can automatically obtain suitable and precise services (being "Smart" can privately perceive users' needs and provide accurate service information) by data accumulation with technological means (devices)	
Includes not only sensors application, data mining (location-based service information collation and dissemination), but also other techniques such as positioning technology, the SNS (social network system), and the social network technology applications	
The tourism supported at the level of the tourist region by integrated efforts to find innovative ways for the accumulation and the aggregation or the use of data extracted from infrastructure, social connections, government or organizational sources	
The tourism, in which the constant and systematic use of smart elements leads to the creation of additional travel value for the tourist	Kormjagina N.N. 2017
Logical evolutionary development of traditional tourism and etourism as a consequence of technology-based innovation;	A. Kontogianni & E. Alepis 2020
The conception includes privacy preserving, context awareness, cultural heritage, recommender systems, social media, internet of things, user experience, real-time, user modeling, augmented reality and big data.	

Kononova, Olga, et Al. 2020. Research synthesis tabel "From e-Tourism to Digital Tourism. Terminologically Review"

Annex 2 – Digital Tourism

Digital Tourism	
Definition of the concept	Author/Year
The convergence between the physical and digital worlds, supported by sensors that collect data resulting from the interaction of tourists and the environment	Julio Navío-Marco et al., 2018
The online purchase of ready-made tours formed by tour operators; development and implementation of mobile applications, including for tourists	Cherevichko T.V. et al., 2019
The digitalization of amateur tours through the creation of online schools for novice travelers, and others. the formation of a digital sector of the tourism economy	
A new type of tourism, which is often associated with e-tourism, developing in the vastness of the virtual world; includes the formation of a new type of tourism and a new type of tourist - "digital tourist	Voronkova L.P, 2019

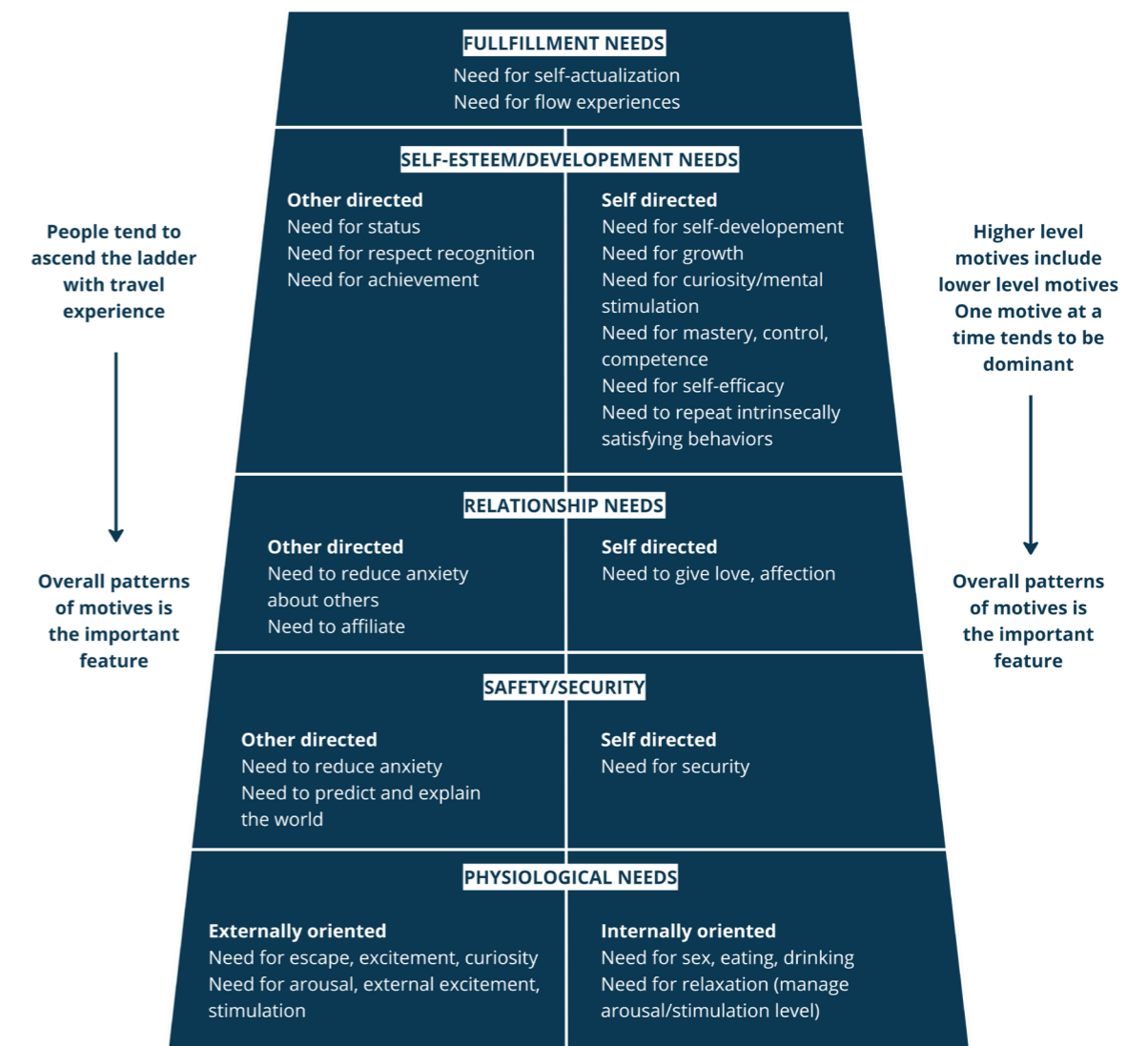
Kononova, Olga, et Al. 2020. Research synthesis tabel "From e-Tourism to Digital Tourism. Terminologically Review"

Annex 3 – Push & Pull Factors

Literary Review of Previous Studies Examining Push And Pull Factors

Researcher	Push Factors	Pull Factors
Dann (1977)	Anomie, ego enhancement	
Crompton (1979)	Escape, self-exploration and evaluation, relaxation, prestige, regression, enhancement of kinship relationships, social interaction	Novelty, education
Yuan and McDonald (1990)	Escape, novelty, prestige, enhancement of kinship relationships, relaxation/ hobbies	Budget, culture and history, wilderness, ease of travel, cosmopolitan environment, facilities, hunting
Fodness (1994)	Ego-defense, knowledge, reward maximization, punishment avoidance, value expression, social adjustment	
Uysal and Jurowski (1994)	Re-experiencing family and togetherness, sports, cultural experience, escape	Entertainment/resort, outdoors/nature, heritage/culture, rural/inexpensive
Turnbull and Uysal (1995)	Cultural experiences, escape, re-experiencing family, sports, prestige	Heritage/culture, city enclave, comfort/relaxation, beach resort, outdoor resources, rural and inexpensive
Oh, Uysal, and Weaver (1995)	Knowledge/intellectual, kinship/social interaction, novelty/adventure, entertainment/prestige, sports, escape/rest	Historical/cultural, sports/activity, safety/upscale, nature/outdoor, inexpensive/budget
Cha, McCleary, and Uysal (1995)	Relaxation, knowledge, adventure, travel bragging, family, sports	
Sirakaya and McLellan (1997)		Local hospitality and services, trip cost and convenience, perceptions of a safe/secure environment, change in daily life environment, recreation and sporting activities, entertainment and drinking opportunities, personal and historical link, cultural and shopping services, unusual and distant vacation spot.

Annex 4 – Travel Career Ladder



Pearce (1991) Travel Career Ladder.

Jumrin, Said, & Maryono Maryono. «Motivation and Perception of Tourists as Push and Pull Factors to Visit National Park», Vol. 31, 2018.

Annex 5 - Different Nationality Profiles



Travel **4 times a year** for a **6.7 days-long trip** on average.

Hyperconnected — many of them use online tools to plan their trip — **63% for search engines, 60% for online travel agencies, and 57% for travelers reviews websites.**

For **decision-making** they trust **their family and friends (54%)**, but mostly online contents such as **travel websites and blogs (51% on average).**

Budget represents the **primary fact during the planning of a trip for 68% of the American tourists.** They spend an average of **\$1978** per trip and is distributed as follows: **27% for the accommodation** (63% of them go to a hotel), **20% for the flight**, and **17% for the food.**

Have less holidays so they prefer to visit the most places possible and optimize time.



Germans are the world champions of tourism, ahead of the Chinese. More than 36% of them are city-dwellers.

Even if they are ready to spend 10% more than the French on a vacation, but 20% less than the English, they don't turn to luxury hotels before anything else.

Hotels are the Germans' favourite things (63% of the bookings, mostly in 2 & 3 stars hotels), than **3 & 4 stars campsites** and finally **guesthouses** it also needs to be promoted on social medias. 49% of the Germans trust online recommendations from other travelers to choose their accommodation.

91% of German travelers love visiting monuments and castles. 34% appreciate tasting and buying regional products and 30% enjoy bicycle rides on small roads or surrounded by nature. In seaside resorts, the beach is obviously a popular activity, with a preference for beaches that kept their wilderness.

Research from Passenger eXperience & Communication Onboard Digital Media

Annex 6 - Basic Algorithm

```
# Step 1: Data Collection
def collect_user_data():
    # Code to collect user data from social media platforms
    pass

# Step 2: Data Preprocessing
def preprocess_data(data):
    # Code to clean and preprocess the collected data
    pass

# Step 3: Profile Creation
def create_user_profile(preprocessed_data):
    # Code to create user profiles based on the preprocessed data
    pass

# Step 4: Feature Extraction
def extract_features(user_profile, additional_input):
    # Code to extract relevant features from the user profile and additional input
    pass

# Step 5: Recommendation Generation
def generate_recommendations(features):
    # Code to generate personalized travel recommendations using machine learning techniques
    pass

# Step 6: Recommendation Refinement
def refine_recommendations(recommendations, constraints):
    # Code to apply filters and constraints to refine the recommendations
    pass

# Step 7: Presentation and Delivery
def present_recommendations(recommendations):
    # Code to present the personalized travel recommendations to the user
    pass

# Step 8: Continuous Learning and Improvement
def gather_user_feedback():
    # Code to gather user feedback on the recommendations
    pass

# Main Function
def main():
    # Step 1: Data Collection
    user_data = collect_user_data()

    # Step 2: Data Preprocessing
    preprocessed_data = preprocess_data(user_data)

    # Step 3: Profile Creation
    user_profile = create_user_profile(preprocessed_data)

    # Step 4: Feature Extraction
    additional_input = get_additional_input() # Code to get additional user input
    features = extract_features(user_profile, additional_input)

    # Step 5: Recommendation Generation
    recommendations = generate_recommendations(features)

    # Step 6: Recommendation Refinement
    constraints = get_constraints() # Code to get user constraints
    refined_recommendations = refine_recommendations(recommendations, constraints)

    # Step 7: Presentation and Delivery
    present_recommendations(refined_recommendations)

    # Step 8: Continuous Learning and Improvement
    gather_user_feedback()

# Execute the main function
if __name__ == "__main__":
    main()
```

Annex 7 – Branding

Brand Name	Marco Polo
NARRATIVE	
Description	A travel app that unlocks a personalized world of adventure for every user. With a compass logo symbolizing exploration, the app leverages user preferences and digital trails to curate tailored destination suggestions. Marco Polo empowers users to discover a world made just for them, offering a seamless and intuitive interface for exploring unique travel experiences. From uncovering hidden gems to crafting personalized itineraries, the app embodies the spirit of discovery and provides a trusted companion for unforgettable journeys.
Purpose	To inspire and empower individuals to embark on personalized and meaningful travel experiences. We believe that travel has the power to broaden horizons, foster cultural understanding, and create lasting memories.
Personality	Friendly, Resourceful, Reliable and Enthusiastic. If Marco Polo were a person, we would want it to be perceived as a trusted and knowledgeable travel companion with a vibrant and adventurous personality. Marco Polo would be seen as a well-traveled explorer, constantly seeking out new experiences and sharing valuable insights with users. The brand would be perceived as friendly, approachable, and genuinely interested in understanding each users' unique interests and preferences.
Position	Because we offer a truly personalized and curated experience like no other. Unlike generic travel apps, we go beyond surface-level recommendations and delve into the nuances of each user's preferences, interests, and digital trail to provide tailored recommendations and suggestions. Our advanced algorithm and intelligent data analysis ensure that every destination and activity suggested by Marco Polo aligns perfectly with the user's unique travel profile.
Mission	To empower individuals to explore the world in a deeply personalized and meaningful way. We are dedicated to curating tailored travel experiences that align with each user's unique traveler profile.
Vision	To revolutionize the way people, discover and engage with the world through technology and personalization. We envision a future where travel experiences are no longer generic but tailored to the individual.

UNIQUE SELLING POINT	
Unique Selling Point	The integration of social media into personalized suggestions of travel destinations and itineraries. We co-create valuable proposals by partnering with the user who inputs their data.
KEY IDEAS	
Key Terms	Honest, trustworthy, authentic, transparent, dependable, innovator.
Anti-Terms	Generic, limited, cookie-cutter, unreliable, slow, overwhelming.
Archetype	The Explorer archetype embodies the spirit of adventure, curiosity, and a desire to explore the unknown. It represents a brand that seeks to discover new territories, whether they are physical places or new experiences.
MARKET RESEARCH	
Demographics	Digital natives, particularly Gen Z and Millennials (Gen Y), who are accustomed to using technology and value personalized experiences, middle-class, the market is global in nature.
Psychographics	Adventurous and curious, Individualistic, tech-savvy and connected, experience-oriented, culturally curious, and socially conscious.
Competitors	Trip it, Trip Advisor, Travel, The Trip Boutique, Trip Notes, Orkoi.

Interviews

Male, 35, Portuguese, People Manager

How do you typically approach planning for a trip? Do you have a specific process or strategy?

Depending on the trip, I normally look for cheap flights, ideally to places I haven't been before. When I find something interesting, I also check hotel prices to see if it makes sense. If it makes sense timewise and financially, I check with my partner just to see if I'm not missing anything, and then I book it. Depending on the city I'm going to, I try not to Google too much about the city to avoid having too high expectations. I am usually very flexible. Sometimes I go to Google to read blogs about how many days are recommended for certain destinations, but I find that to be just an opinion. Every city can be visited "for a day or two," but you can't really experience the city in just a day or two.

What factors influence your decision to travel to a particular destination?

Time and the dates I have available. I'm normally looking for trips within a specific timeframe. For example, if my partner has free Thursday and Friday, I take that into account. Then I look at prices and also consider the fact that it's somewhere I haven't been before, or my partner hasn't been before. Can you describe the sources you rely on to gather information about your travel destination?

My go-to are Skyscanner for flights and Booking.com for hotels. Sometimes I also use Kayak.

What specific information do you usually look for when researching a destination?

Depending on the trip, I look for cultural information to be aware of. If I'm traveling outside of Europe, I check health regulations, necessary documentation, and pre-trip doctor's appointments. I also check the political situation for certain countries.

How do you prioritize your travel preferences and needs when selecting a destination?

I prioritize based on places I really look forward to seeing and if it's time sensitive. For example, sports events are important to me, so sometimes I prioritize choosing a destination based on certain dates.

Are there any particular challenges or pain points you encounter during the planning phase? If so, what are they?

A lot of times when I start looking at things and find cheap flights somewhere, I then look at hotels and become unsure, taking my time to decide. However, within a day, the prices often change drastically and go up. Other times, I'm interested in a certain hotel with a great price, only to find out that it's not available on the dates I want. I sometimes want to visit a place but realize too late that the tickets are sold out.

How do you make decisions regarding accommodation options? What factors are most important to you?

Location is important to me. If it's a city I know, I look for a location that makes sense for me to walk around on foot. If I'm in a place where I'll be using trains for transportation, I look for a place close to a train station or a metro station for better mobility. Price is obviously a factor as well. If the prices are relatively cheaper.

I will look for quality accommodation with amenities and breakfast included. If I'm taking a car, parking availability is also a consideration.

How do you typically plan your activities and attractions to visit at your travel destination?

Sometimes I go to Google and search for top attractions in the cities. Then, I use Google Maps and start adding the locations to the map. Google automatically highlights other attractions, and I also check the ratings of the places. Anything that is heavily visited and has good reviews, I automatically add to my list. Then I prioritize based on my interests.

Do you involve others (such as friends, family, or online communities) in your travel planning process? If yes, how do you seek their input or recommendations?

I ask if they've been to the destination before and if they have any recommendations, especially anything outside of the mainstream that I should consider. I also ask what I cannot afford to miss.

What role do reviews and recommendations play in your decision-making process?

If it's a recommendation from a friend, I will definitely follow it if it makes sense to me within my possibilities. Online reviews are also important to me, especially if the reviews are very good. They make me more curious about a place.

How do you handle budgeting and financial considerations during the planning phase? Do you use any specific tools, apps, or websites to assist you in the planning process? If yes, which ones and why?

I don't budget extensively. I try to be mindful of not spending a lot on hotels and flights, but when I'm already at the destination, I try to make the best of my time there and not skimp on experiences.

How much time and effort do you typically invest in the planning phase of a trip?

It depends on how committed I am to the trip and whether I have something specific that I need to see. Sometimes, the person I'm traveling with helps me with the research. I can't really say how much time, as I often have already marked things on my maps or have read about them somewhere.

Would a travel app be helpful to you?

Yes, I would find it helpful.

Are there any specific features or functionalities you would like to see in a travel app that would assist you during the planning phase?

If I could tell the app that I want to leave from a certain place in the morning and return on a specific day at night, no matter the airport if there's a way, and provide a budget and dates, I would like it to suggest things that align with my interests and preferences. It would be great if the app had knowledge of places I've already been to and considered the preferences of my partner. Additionally, if the app could inform me about any local festivities happening during my travel and suggest interesting facts or things to check out related to those events, that would be fantastic.

Female, 29, Bolivian, Commercial Engineer

How do you typically plan your activities and attractions to visit at your travel destination?

I use TikTok and Instagram and rely on those apps for planning. But I only do it if it makes sense depending on the weather, time, etc. I distribute the activities where I can, and I'm flexible in that regard. Once there, I do what I can, but sometimes there are unforeseen events.

Do you involve others (such as friends, family, or online communities) in your travel planning process? If yes, how do you seek their input or recommendations?

For me, it's better to ask after seeing information in online communities. I like to ask people who have already been to the destination and trust their words. A trip will never be repeated. What role do reviews and recommendations play in your decision-making process?

Recommendations are very important once the decision is made. If it makes sense to me, I follow them.

How do you handle budgeting and financial considerations during the planning phase? Do you use any specific tools, apps, or websites to assist you in the planning process? If yes, which ones and why?

I make an excel sheet, and I start with pen and paper. I've never used apps.

Can you describe a recent trip planning experience where something went particularly well or didn't go as expected? What factors contributed to this outcome?

During a trip to Miami, my flight was postponed, and I had to stay one more day in Bogota due to storms. I didn't have a budget for it. And the problem was the airline at that time, it gave us no alternative solutions.

Are there any specific features or functionalities you would like to see in a travel app that would assist you during the planning phase?

As for specific features or functionalities I would like to see in a travel app that would assist me during the planning phase, I would like it to suggest everything from flights, transportation, activities, and provide recommendations for places to visit. It should also include safety warnings and suggestions on what clothing to pack. It would be helpful if the app guides me in terms of transportation options and even allows me to purchase tickets directly through the app.

How do you typically approach planning for a trip? Do you have a specific process or strategy?

Mostly through travel agencies, I don't search on my own. I check Tropical Tours, they provide recommendations. This relates to hotels and flights, mostly to Miami, and the contact person always notifies me about the prices. In Cancun, they got free activities.

What factors influence your decision to travel to a particular destination?

It depends. For example, the desire for a vacation, the type of trip, or business purposes. Free accommodation is sometimes available (to take into account), and there may be family or friends involved. For relaxation trips, I create an itinerary. The budget and the 15 days a year in which I can travel are crucial factors; the days are limited. Now it's possible to pay for things, but time is limited.

Can you describe the sources you rely on to gather information about your travel destination?

Mainly through travel agency apps because they also offer car rental options. TikTok now provides great tips that are very practical. Later, I share this information with the people I'm traveling with in private groups. Once I have a restaurant, for example, I search for it on Instagram and check the stories.

What specific information do you usually look for when researching a destination?

I ask about the experiences of others, what they recommend. Sometimes I read on TripAdvisor or blogs where I can find people's opinions. Mostly, I rely on recommendations from individuals and asking locals.

How do you prioritize your travel preferences and needs when selecting a destination?

It depends on the type of trip. For example, I prefer all-inclusive packages for the comfort of having everything included. When it's a business trip, I try to save money in every possible way, spend less and generate more. When it's for entertainment, I consider the most popular places and location as well.

Are there any particular challenges or pain points you encounter during the planning phase? If so, what are they?

Not particularly, but it's because, like I said, I completely rely on tourism agencies for the planning. One thing though is that coordinating with everyone and deciding on what everyone wants to do is a hassle.

How do you make decisions regarding accommodation options? What factors are most important to you?

Food and comfort are the most important factors.

Female, 21, Indian, Student

How do you typically approach planning for a trip? Do you have a specific process or strategy?

I don't plan mostly.

What factors influence your decision to travel to a particular destination?

Who I am traveling with..

Can you describe the sources you rely on to gather information about your travel destination?

Make my trip & Agoda

What specific information do you usually look for when researching a destination?

Peace, food and culture

How do you prioritize your travel preferences and needs when selecting a destination?

Based on expenses.

Are there any particular challenges or pain points you encounter during the planning phase? If so, what are they?

Transportation, timing and availability.

How do you make decisions regarding accommodation options? What factors are most important to you?

I prioritize time and comfort

How do you typically plan your activities and attractions to visit at your travel destination?

To visit more places in less time. Cover as much as possible. Do you involve others (such as friends, family, or online communities) in your travel planning process? If yes, how do you seek their input or recommendations?

No.

What role do reviews and recommendations play in your decision-making process?

Instagram romanticizes unpleasant places too, so not relevant.

How do you handle budgeting and financial considerations during the planning phase? Do you use any specific tools, apps, or websites to assist you in the planning process? If yes, which ones and why?

I only write in a diary

Do you use specific tools, apps or websites to help you in the planning process? If yes, which ones and why?

Make my trip & Agoda

How much time and effort do you usually invest in the planning phase of a trip?

Maximum two days

Is there a specific feature or functionality that you would like to see in a travel app that would help you during the planning phase?

Nothing comes to mind.

Female, 33, Bolivian, Environmental Engineer

How do you typically plan your activities and attractions to visit at your travel destination?

First a general tour of the entire site and then specific places of my interest.

Do you involve others (such as friends, family, or online communities) in your travel planning process? If yes, how do you seek their input or recommendations?

I involve the person who I'll be traveling with and if I travel alone, I seek opinions from people who have gone to the same destination.

What role do reviews and recommendations play in your decision-making process?

They are very important because it is better to know from people who have already been to the sites, to see the reality of things.

How do you handle budgeting and financial considerations during the planning phase? Do you use any specific tools, apps, or websites to assist you in the planning process? If yes, which ones and why?

I use excel.

Do you use specific tools, apps or websites to help you in the planning process? If yes, which ones and why?

Yes, I use Booking, Civitatis (a tour searcher), calendars and other planners.

How much time and effort do you usually invest in the planning phase of a trip?

About 3 months prior to the trip and at least 4 hours a week
Is there a specific feature or functionality that you would like to see in a travel app that would help you during the planning phase?

Yes, it would be interesting if they could show options for current or new activities that correspond to the dates on which you would make the trips.

Female, 28, Peruvian, Master's student

How do you typically approach planning for a trip? Do you have a specific process or strategy?

Depending on the days I look for itineraries on social media
What factors influence your decision to travel to a particular destination?

To check it out of my bucket list

Can you describe the sources you rely on to gather information about your travel destination?

Other people recommendations.

What specific information do you usually look for when researching a destination?

Price

How do you prioritize your travel preferences and needs when selecting a destination?

Budget and activities

Are there any particular challenges or pain points you encounter during the planning phase? If so, what are they?

Too many decisions.

How do you make decisions regarding accommodation options? What factors are most important to you?

Price and comfort

How do you typically plan your activities and attractions to visit at your travel destination?

According to the transportation

Do you involve others (such as friends, family, or online communities) in your travel planning process? If yes, how do you seek their input or recommendations?

Yes, I send them my plan and they can update or give feedback

What role do reviews and recommendations play in your decision-making process?

I use them often, Tik toks, reels, blogs, YouTube videos.
How do you handle budgeting and financial considerations during the planning phase? Do you use any specific tools, apps, or websites to assist you in the planning process? If yes, which ones and why?

I use wanderlog App and sometimes excel.

Do you use specific tools, apps or websites to help you in the planning process? If yes, which ones and why?

The ones above

How much time and effort do you usually invest in the planning phase of a trip?

A couple days

Is there a specific feature or functionality that you would like to see in a travel app that would help you during the planning phase?

Maybe more instant itinerary suggestion according to the days of traveling with the possibility of modification.

Male, 31, Portuguese, Help Desk Specialist

How do you typically approach planning for a trip? Do you have a specific process or strategy?

Check accommodation prices, security levels, search for monuments or historical places, use online guides and blogs to check if it is worth visiting and which are the best places and restaurants to visit.

What factors influence your decision to travel to a particular destination?

Price of airfare and accommodation, security, number of historical and/or emblematic places, ease of transport, beauty of landscapes and the city.

Can you describe the sources you rely on to gather information about your travel destination?

TripAdvisor, YouTube, blogs available on the internet.
What specific information do you usually look for when researching a destination?

Price of airfare and accommodation, security, number of historical and/or emblematic places, ease of transport, beauty of landscapes and the city.

How do you prioritize your travel preferences and needs when selecting a destination?

The most important things are the cost of the ticket and accommodation.

Are there any challenges or pain points you encounter during the planning phase? If so, what are they?

Irrelevant information on travel blogs that contribute nothing to a search, unclear information in terms of transport and transport price, sometimes unrealistic 2- or 3-day itineraries that it is not possible to complete in the indicated time.

How do you make decisions regarding accommodation options? What factors are most important to you?

Price and distance from the location/city to visit.

How do you typically plan your activities and attractions to visit at your travel destination?

Check websites like TripAdvisor or the town hall websites of the place itself. Take into account price, duration, and distance from the accommodation.

Do you involve others (such as friends, family, or online communities) in your travel planning process? If yes, how do you seek their input or recommendations?

Yes, especially in online communities and blogs, looking for the places that gather the most consensus.

What role do reviews and recommendations play in your decision-making process?

Relative importance as it gives you an idea of what to expect, and would probably avoid a place with less than 3 stars.

How do you handle budgeting and financial considerations during the planning phase? Do you use any specific tools, apps, or websites to assist you in the planning process? If yes, which ones and why?

Write down expected expenses in Excel and budget for food.

Do you use specific tools, apps, or websites to help you in the planning process? If yes, which ones and why?

Google Maps, trip advisor.

How much time and effort do you usually invest in the planning phase of a trip?

1 or 2 hours a day for a week.

Is there a specific feature or functionality that you would like to see in a travel app that would help you during the planning phase?

An application where you can save all the documents/tickets and QR codes that will be used on a trip. There could also be the possibility for users to update in real time with feedback issues related to opening hours or opening/closing of an attraction or establishment.

Female, 34, Finnish, Student

How do you typically approach planning for a trip? Do you have a specific process or strategy?

I think where I would like to go and then do some googling.

What factors influence your decision to travel to a particular destination?

What activities or sightseeing it offers.

Can you describe the sources you rely on to gather information about your travel destination?

The location's official travel guide, maybe Google, TripAdvisor
What specific information do you usually look for when researching a destination?

Sightseeing or activity options, hotel prices, possible festivities etc. happening there.

How do you prioritize your travel preferences and needs when selecting a destination?

I usually care the most about the hotel I am staying in so it comes first. After that I try and budget everything else.

Are there any challenges or pain points you encounter during the planning phase? If so, what are they?

Not really, other than lack of funds

How do you make decisions regarding accommodation options? What factors are most important to you?

I look for a good combination of comfort, price, and in the case of hotels, locality.

How do you typically plan your activities and attractions to visit at your travel destination?

I check the tourism guides online, I google, use Google Maps... I simply try to figure out what I would be interested in.

Do you involve others (such as friends, family, or online communities) in your travel planning process? If yes, how do you seek their input or recommendations?

Not really. I might check Google reviews or TripAdvisor but not often.

What role do reviews and recommendations play in your decision-making process?

I sometimes look at the star ratings on Google Maps but they rarely affect my decision.

How do you handle budgeting and financial considerations during the planning phase? Do you use any specific tools, apps, or websites to assist you in the planning process? If yes, which ones and why?

I don't use excel but I make a loose budget in my head and try to follow it.

Do you use specific tools, apps, or websites to help you in the planning process? If yes, which ones and why?

-
How much time and effort do you usually invest in the planning phase of a trip?

Depends. but it is usually about 2-3 hours, usually in smaller sections of 15-30 minutes.

Is there a specific feature or functionality that you would like to see in a travel app that would help you during the planning phase?

Recommendations based on my needs, wants, budget, interests, etc. Would be kind of cool.

Female, 29, Bolivian, Architect

How do you typically approach planning for a trip? Do you have a specific process or strategy?

I don't have a particular strategy; it depends on the destination.

What factors influence your decision to travel to a particular destination?

That the site is of interest to me and that the budget is convenient

Can you describe the sources you rely on to gather information about your travel destination?

Travel videos (such as Expedia) and vlogs from youtubers who trust their opinion.

What specific information do you usually look for when researching a destination?

Sites to visit and cost of lodging.

How do you prioritize your travel preferences and needs when selecting a destination?

The most important things are the cost of the ticket and accommodation.

Are there any challenges or pain points you encounter during the planning phase? If so, what are they?

Corroborate or trust the information on the internet, so that it is updated.

How do you make decisions regarding accommodation options? What factors are most important to you?

As for accommodation, that is well located and has a connection to public transport. In flights, the cost benefit, if it is a flight of many hours and stopovers but it is slightly cheaper than a direct flight, I prefer the direct flight.

How do you typically plan your activities and attractions to visit at your travel destination?

I search the internet for "What to do in X city X number of days", I compare places and read information or watch videos about them, I choose which ones I would like to visit, and I put together a schedule.

Do you involve others (such as friends, family, or online communities) in your travel planning process? If yes, how do you seek their input or recommendations?

No, I make the itinerary already knowing what my companion would like to visit and at the end we discuss it to refine the details

What role do reviews and recommendations play in your decision-making process?

In terms of visiting sites, not much. In terms of accommodation or restaurants, yes, I take reviews into account.

How do you handle budgeting and financial considerations during the planning phase? Do you use any specific tools, apps, or websites to assist you in the planning process? If yes, which ones and why?

I use excel.

Do you use specific tools, apps, or websites to help you in the planning process? If yes, which ones and why?

Almost exclusively google maps, to save locations and methods of transportation.

How much time and effort do you usually invest in the planning phase of a trip?

A couple of days, I'm not much of a planner myself.
Is there a specific feature or functionality that you would like to see in a travel app that would help you during the planning phase?

I have not used travel planning apps beyond google maps, but it could be an app that organizes pdf or QR codes for tickets/ flights etc. That for example in my case I end up sending them to a WhatsApp chat with myself to have them on hand.

Female, 29, Bolivian, Sales Supervisor

How do you typically approach planning for a trip? Do you have a specific process or strategy?

I travel based on what my budget allows, as I don't have any time restrictions with work. I take advantage of holidays to travel, taking a few vacation days to gain free time. I look for the top three things I must visit and plan from there.

What factors influence your decision to travel to a particular destination?

I prioritize destinations that align with my goal of visiting 35 countries by the time I turn 35. I focus on visiting the wonders of the world. I have already visited all the wonders in Latin America, so now I select a trip that includes one of the wonders of the world. I also consider things that I personally enjoy, such as prioritizing destinations with beaches since my country doesn't have any.

Can you describe the sources you rely on to gather information about your travel destination?

TikTok is an important reference for me. Google is too generic. On TikTok, I find real experiences and up-to-date information from people. I also read blogs from certain travelers that I follow and have selected. I then filter prices and prioritize based on my preferences. I usually enjoy extreme activities, so I may skip some iconic places to prioritize these activities. When it comes to accommodation, I usually choose Airbnb because I had a bad experience with booking hotels. I like to create my own experience and feel that hotels restrict me. For flights, my strategy is to book them three months in advance. I use Google Flights, which gives me references from various search engines. It provides me with all the possibilities. I have used Kayak before, but I didn't like the service. I triple-check on different platforms like 1,2,3 Miles, Skyscanner, and Hopper. However, I prefer to book directly with the airline to receive information directly. I verify that the connections make sense, as sometimes there are options with illogical layovers. I had a friend who worked in tourism, and she used to give me advice on this issue.

What specific information do you usually look for when researching a destination?

The first thing I look for is a city tour or specific information about the city, such as must-visit places, walking tours, important monuments, extreme sports, a beautiful sunset, top restaurants, and local cuisine. Depending on whether it's a mountain or beach destination, I try to allocate a day for relaxation (considering time availability and fatigue).

How do you prioritize your travel preferences and needs when selecting a destination?

My initial priority is to visit the wonders of the world since I have a goal of seeing all of them before a certain age. As for the rest, it depends on my personal preferences and the things I enjoy. For example, I prioritize destinations with beaches since there are no beaches in my country.

Are there any challenges or pain points you encounter during the planning phase? If so, what are they?

The main limitation for me is the budget. There are places where there is so much to do that, I can't do everything. Sometimes the weather works against me, but I can usually find references online to plan accordingly. Planning with groups

can also be challenging. Time is a limitation, so I create a wish list and start prioritizing. Sometimes a future trip is born from a place I couldn't visit.

How do you make decisions regarding accommodation options? What factors are most important to you?

I like to have everything under control. The day of the week plays a role in my decision-making. If I arrive on a Friday, night-life options are important to me. Weekdays are more relaxed. Sometimes I modify my plans based on what arises during the trip. I like to have an itinerary to stay organized, especially if there are activities that require prior reservations. I also adjust my days based on what comes up. Sometimes there are full-day tours that can be canceled, so flexibility is important.

Do you involve others (such as friends, family, or online communities) in your travel planning process? If yes, how do you seek their input or recommendations?

In my office, my colleagues are all young and avid travelers. I ask them for references and advice, as well as my family. TikTok is also a significant source of recommendations for me. I send TikTok's to the group and we come to an agreement.

What role do reviews and recommendations play in your decision-making process?

I feel that TikTok recommendations have about 90% reliability. They are authentic and real. While blogs complement the information, TikTok provides more real-time experiences.

How do you handle budgeting and financial considerations during the planning phase?

I use Splitwise during the trip with my friends. I plan my budget, including daily lunches and any excess expenses. In the evening, I update it. I also use Excel to create a table with the hours and departure times for tours, including what they include. I use Instagram to explore locations for photography. I also visit government websites that suggest places to visit.

How much time and effort do you typically invest in the planning phase of a trip?

If I put effort into it, I usually spend about a week researching flights, gathering references, and planning. For example, I have thoroughly planned my trip to Thailand and have two itinerary options: one expensive and one budget friendly. I play around with activities. Due to my TikTok algorithm, I usually already have a lot of saved videos for inspiration.

Would you use a travel app if you considered it helpful?

Yes, I have seen many travel apps that use artificial intelligence to create itineraries, such as i. plan.ai. It speeds up the process of suggesting places to visit, but you still have to customize it according to your own criteria.

Are there any specific features or functionalities you would like to see in a travel app that would assist you during the planning phase?

I would like a feature that provides a quick view of the destination and reference prices in different categories, such as high cost, medium cost, and low cost. It's because sometimes I want a high-cost trip, and other times I prefer a low-cost one. I want an app that gives me possibilities.

Male, 31, Bolivian, Networks and Telecommunications Engineer

Do you involve others (such as friends, family, or online communities) in your travel planning process? If so, how do you seek their opinion or recommendations?

Yes, the travel companions have to agree to follow the itinerary and comply with the schedules, it is planned together to define all the possible activities and based on the budget the schedule is put together.

What role do social media reviews and recommendations play in your decision-making process? (Blogs, Tik Toks, Reels, Google Maps)

50% of the decision making should come from the reviews. How do you handle budget and financial considerations during the planning phase? Do you use any tool? (e.g., Excel)

An Excel is put together with a schedule of activities and budget according to the day.

Do you use specific tools, apps or websites to help you in the planning process? If yes, which ones and why?

Excel, Google maps, web pages for reviews search.

Can you describe a recent travel planning experience where something went particularly well or didn't go as expected? What factors contributed to this result?

We traveled to Argentina, and we did not plan to go to a concert, we did not have tickets or seen the transport to the place, however we went to queue to enter and while we waited, we looked for someone who sells tickets, we just managed when we had to enter, it was stressful but we got to enter.

How much time and effort do you usually invest in the planning phase of a trip?
It is planned well in advance to be able to gather all the optimal conditions of the trip. I couldn't tell about the time.

Is there a specific feature or functionality that you would like to see in a travel app that would help you during the planning phase?
An application that you can enter all the destinations, assign them a value according to your preferences, catalog them and automatically organize a schedule, considering time and price, considering transportation, if it were by land, plane, etc. and you can comment and see opinions of the people in the destinations.

How do you typically approach planning for a trip? Do you have a specific process or strategy?

Through a stages process:

- 1.- The necessary requirements to travel to the place of destination
- 2.- transportation (best routes to reach the destination)
- 3- Hotels/Airbnb
- 4.- budget for activities

What factors influence your decision to travel to a particular destination?

The number of tourist attractions that the area has, in addition to the budget.

Can you describe the sources you trust to gather information about your travel destination?

Specialized travel pages (trip advisor, trivago, etc.) as well as blogs of people who have been to the destination.

What specific information do you usually look for when researching a destination?

Tourist attractions, historical monuments, and some special events in the place First, I look for the tickets, then the hotel, then the activities to do, places to eat and if by coincidence there will be a concert.

How do you prioritize your travel preferences and needs when selecting a destination?

The budget, the ease of reaching the destination and the tourist attractions they have.

Are there any particular challenges or points of difficulty that you encounter during the planning phase? (eg Too much information, transportation coordination, etc.) If so, what are they? Optimize the time to see all the events, put together the schedule of activities since it is changing.

How do you make decisions regarding accommodation and flight options? What factors are most important to you?

Through specialized pages, the ease of payment through the Internet, quality/price.

How do you usually plan your activities and attractions to visit in your travel destination?

According to the importance, the activities are classified between "essential", "optional", "essential if it happens (example: a Pantera concert)". The essential ones are carried out first and then the optional ones, if it is not possible to organize them like this, it is about optimizing the time between activities

Female, 24, Spanish, Full-time worker

How do you typically approach planning for a trip? Do you have a specific process or strategy?

I usually start with the destination and then I adapt my vacations with the best time to go to the destination

What factors influence your decision to travel to a particular destination?

Money, nature and if there is something interesting to see, like cultural monuments

Can you describe the sources you rely on to gather information about your travel destination?

blogs from other people

What specific information do you usually look for when researching a destination?

average price of everything, things to do and see, if it is a dangerous place...

How do you prioritize your travel preferences and needs when selecting a destination?

right now money because I am trying to saving

Are there any particular challenges or pain points you encounter during the planning phase? If so, what are they?

i like to travel all the country so some time transportation coordination its a nightmare, also I feel that you dont have all the information only in one place

How do you make decisions regarding accommodation options? What factors are most important to you?

I like to travel safe and comfortable so I prefer to expend a little bit more in flights rather than go in ryanair

How do you typically plan your activities and attractions to visit at your travel destination?

I plan it looking to schedule by hour the activities

Do you involve others (such as friends, family, or online communities) in your travel planning process? If yes, how do you seek their input or recommendations?

yes, my friend looking to collab together to make the plans

What role do reviews and recommendations play in your decision-making process?

i take it as recommendations and the make my own decisions, I prefer to go to unknown places that I searched for.

How do you handle budgeting and financial considerations during the planning phase? Do you use any specific tools, apps, or websites to assist you in the planning process? If yes, which ones and why?

only Excel and then for splitting SettleUp

Do you use specific tools, apps or websites to help you in the planning process? If yes, which ones and why?

No

How much time and effort do you usually invest in the planning phase of a trip?

Depends, but usually more than a week

Is there a specific feature or functionality that you would like to see in a travel app that would help you during the planning phase?

I would like to be easy and with all the information and not to search in a lots of websites or apps