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"Just Google It:" Keywords, Digital Marketing, and the Professional Writer

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‘Just Google It’:
Keywords, Digital Marketing, and the Professional Writer

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I would like to thank and acknowledge my primary advisor Dr. Tara Moore, my secondary advisor Holly Landis, and my third advisor Dr. John Rohrkemper for their continuous help and support throughout this project.

Every answer I could possibly need is at my fingertips, every question is executed through the mobile device in my back pocket. I no longer need to spend hours scouring library bookshelves for the answers to my questions. The days of the index system are over. With a touch of a button, I have all the information I could ever need.

Welcome to 2019. With the younger generation addicted to their devices, the older generations seem to forget what it felt like to live without them. The dependence upon a 6-inch piece of glass, plastic, and metal is immaculate. Ecommerce businesses and digital marketing specialists have growing amounts of data to experiment with. Keywords, SEO, PageRank, Google Analytics, Social Media. The terms very few can define, but very many are required to know and perform in their daily duties.

In simpler terms, the Internet drastically impacts our current society. The way we think, act, and talk is a direct effect of the technology we surround ourselves with daily. Even the way we shop for and purchase products online is different. We are not in control of our habits anymore.

But, why? How could that be possible? And, how do any of these technological terms affect me? I'm just an English major after all. The reality is, the Internet is changing every single one of us, every single day. Searching for an answer using Google, adding hashtags to a recent selfie, or clicking on an advertisement featured on Facebook are all acts of a web-addicted society. Keywords, Google Search queries, and paid advertising corrupt our culture. Unfortunately, a modern world is a digital one. People now search as much as they socialize on the Internet, and everyday millions of people are asking Google questions. Subsequently, Google promptly provides myriads of answers.

However, the answers that appear on the first page of a Google search are tailored to show up in the order they currently do. Trillions of results in less than a second. How does Google do it? Why does Google do it? How does Google's search algorithm affect me?

This thesis will analyze the staple of the digital era: the Google Search engine. With its quintessential part in current human nature, the Google Search engine has become an integral part of our society; a technological tool that hardly anyone thinks twice about. Specifically, this thesis will delve into the anatomy and origin of the Google Search engine, highlighting the simple eigenvector that started it all. Then, this analysis will investigate the practicality of optimizing the Google Search Engine through Google Analytics software and current digital marketing practices. Lastly, a thoughtful combination of the search engine's anatomy and the search engine's optimization will conclude this piece.

Welcome to the story of the Google Search Engine.

Chapter I: An Examination of the Google Search Engine

The Birth of the Search Engine

The Google Search Engine, like all the other search engines readily available on the Internet, starts within the similar means of "permitting users to search the contents of a repository" (Davidson). In simpler terms, the search engine operates as an interface between human readers, the information they seek, and the technology between that separates the two. Modern search engines, including the Google Search Engine, have three major functions they frequently undertake when attempting to provide their users with reliable and fast answers: crawling, indexing, and ranking.

Like a baby, the search engine's first steps involve crawling. Crawling in technological terms, however, means something very different than crawling in stages of human life. Through the pages (and the links contained in these pages), automated robots called "crawlers" or "spiders" frequently creep through "many billions of interconnected documents on the web" (Fishkin and Moz Staff). For the sake of this analysis, I will refer to the term crawler. According to Brian Davidson, "A Web crawler starts from a small list of known Web sites (such as http://www.yahoo.com), selects the address of one Web page from the list, and attempts to retrieve and store it in a local repository" (Davidson). If the crawling of the website is successful, the crawler will then begin to analyze the hyperlinks connected to that web page. Both the website and its active links will then be added to the ongoing list of websites that require frequent crawling.

How could that make sense? A website that has been crawled once should have no need to be recrawled, right? The frequent crawling and recrawling of seemingly popular websites is the basis of the search engine's second major function of indexing. "Once the engines find these pages, they decipher the code from them and store selected pieces in massive databases, to be recalled later when needed for a search query," (Fishkin and Moz Staff). In other words, crawlers frequently race through millions of popular web pages, and external datacenters host the updates and hyperlinks the crawlers discover. These datacenters continuously index billions of web pages, storing thousands of machines that can produce instantaneous search results hundreds of billions, if not trillions of times, in one single day.

According to Moz Blog, a leading SEO and online marketing blog: "Search engines are answer machines. When a person performs an online search, the search engine scours its corpus of billions of documents and does two things: first, it returns only those results that are relevant

or useful to the searcher's query; second, it ranks those results according to the popularity of the websites serving the information" (Fishkin and Moz Staff). Therefore, a search engine finds websites (crawls), stores the information from the websites (indexes), and then retrieves the most relevant results from the index and ranks those results according to their probable popularity (ranking). The tangible result pages the Google Search Engine, or any other popular search engine, provide its curious searchers with is the ranking stage in action. The sole purpose of any search engine is to provide answers. It is the rankings that differ.

Search engine rankings are surprisingly not a coincidence of pure luck or popularity. Rather, they are the product of mathematical algorithms that consider a multitude of other factors into their equations. One such algorithm, and the one of primary focus in this thesis, is Google's PageRank algorithm. Originally produced as one simple eigenvector, Google's PageRank algorithm has evolved into a continuous resource for constant information. It aims to pair entered keywords with relevant, indexed results. Thus, the creation of Google's PageRank algorithm is the evolution of society shifting into a mindset of constant information retrieval and fast satisfactions.

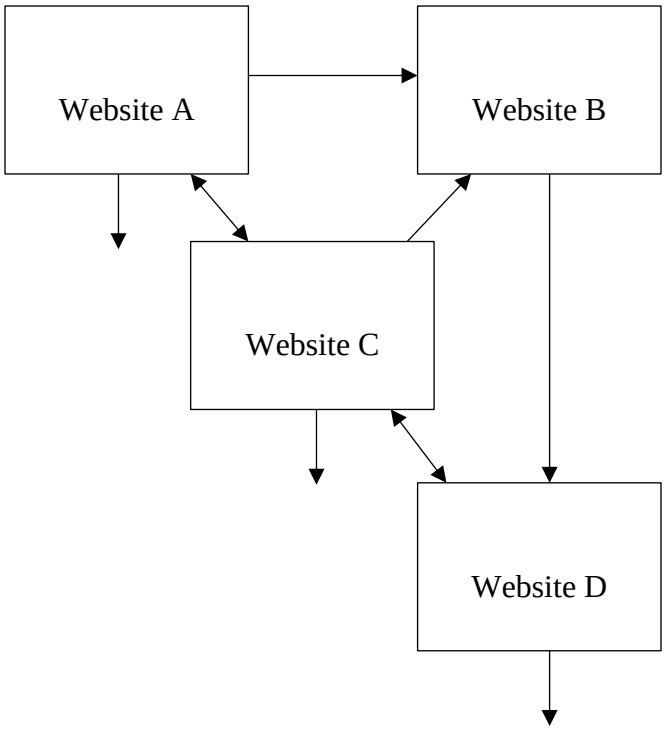
One Simple Eigenvector

The Google Search Engine started as an idea, one simple algebraic eigenvector floating in the minds of two graduate students at Stanford University in 1990. Yet, the thought of the Google Search Engine would be incomplete without mentioning its core: the PageRank algorithm. Unquestionably living **"**at the heart of [Google] is the PageRank algorithm that Brin and Page wrote while they were graduate students at Stanford in 1990. They saw that every time a person with a Web site links to another site, he is expressing a judgment. He is declaring that he considers the other site important" (Pasquinelli 3).

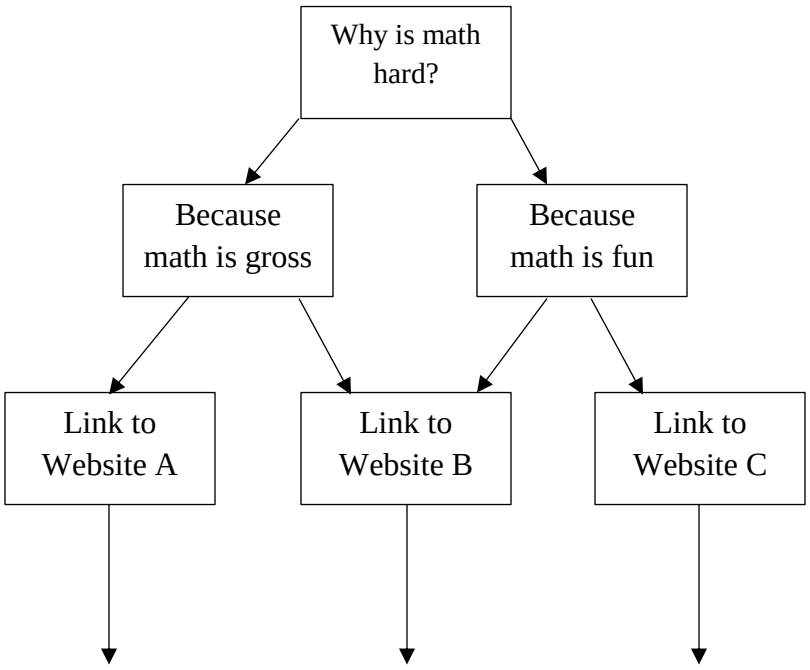
Shortly after the birth of the World Wide Web in 1991, Stanford graduate students Sergey Brin and Larry Page crafted a simple eigenvector, known commonly today as the PageRank algorithm, to set their search engine drastically apart from their competitors: “When Google went online in the late 1990s, one thing that set it apart from other search engines was that its search result listings always seemed to deliver the ‘good stuff’ up front. With other search engines, you often had to wade through screen after screen of links to irrelevant web pages that just happened to match the search text” (Bryan and Leise 569).

During the late 1990s, mathematicians and scientists alike originally used the Internet for its file-sharing capabilities. As a mechanism used to sort, store, and share information with university professors and scholars, many basic search engines, Yahoo for example, hand-indexed their websites in a typical tree-like structure, which presented search results in a disorganized matter (Pasquinelli 4). Their disorganization led to Brin and Page’s innovation. Rather than hand-indexing web pages to be presented in a random fashion, Brin and Page added calculatable value to their webpages, which inherently added value to their Search engine. The differences between these two indexing methods (PageRank and the tree-like structure) are illustrated below.

PageRank Hierarchy



Tree-Type Hierarchy



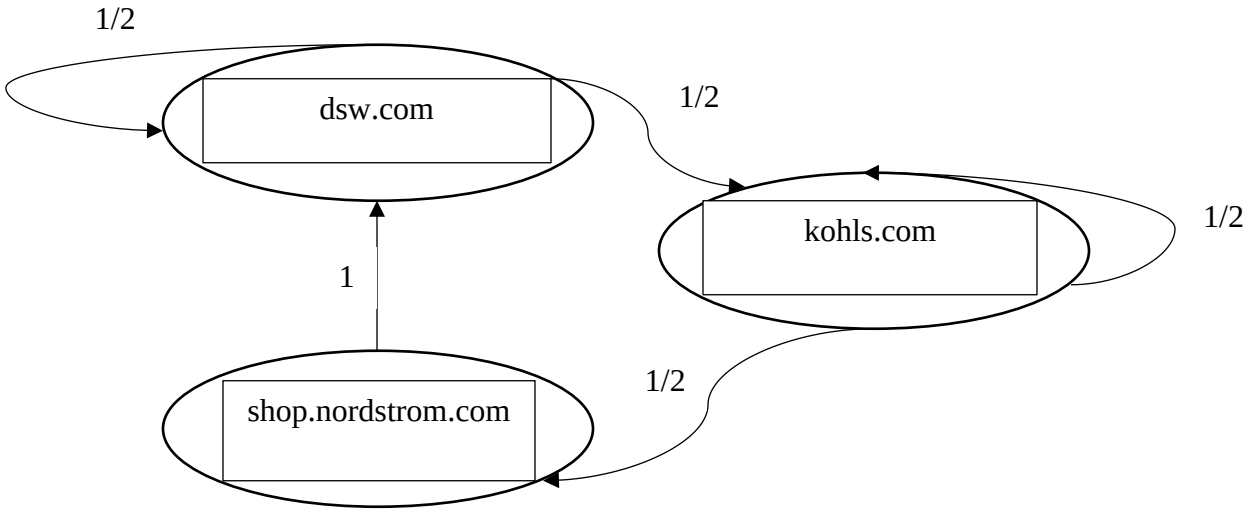
As clearly illustrated, the tree-like hierarchy ranks search results in almost a random fashion. Neither of my sample results have any order or difference, they both have the same number of links to the websites and their search result ranking is irrelevant. This diagram is equivalent to the Yahoo search engine model of the late 1990s.

However, the PageRank hierarchy illustrated in the first model, is a simplified version of Brim and Page's original design. In the original PageRank algorithm, each website starts with an equal probability of being clicked on by a searcher. Then, the remaining interactions are "determined by the number and quality of incoming links. Particularly, a link coming from a node with a high rank has more value than a link coming from a node with a low rank" (Pasquinelli 4). In simplified terms, the PageRank algorithm ordered queried websites based on the probability of users clicking on one website over another.

An Example of the PageRank Algorithm

A practical, and extremely simplified, sample of the innerworkings of the original PageRank algorithm can be found when shopping for shoes online. When typing the search term "blue ballet flats" into the Google search bar, the top three websites that appear are dsw.com, kohls.com, and shop.nordstrom.com. For the simplicity of the example, let's assume that dsw.com, kohls.com, and shop.nordstrom.com all only present me with two options. The probabilities of a user clicking on any of these pages could be calculated and organized as in the illustration below (Castillo, slide 23).

Simplified PageRank Algorithm Example



My search for "blue ballet flats" on the Google Search Engine warranted me three ranked results: dsw.com, kohls.com, and shop.nordstrom.com. Naturally to a lover of shoes, these websites are then judged by me based on a multitude of factors like the price I want to pay for the shoes, the brands of shoes I prefer, the stores I prefer to shop at, the availability of my size shoe, and so forth. However, the Google Search Engine is not capable of adhering to my personal judgements, and therefore, places an equal probability on all three of the websites,

which calculates to 1/3 in this example (Castillo, slide 23).

As shown above, the map visualizes the probabilities of me leaving a website to look elsewhere for shoes after clicking on it, which changes the initial probability of choosing the website to 1/1 or 100 percent. Therefore, after clicking on the first website listed, dsw.com, with 100 percent probability, I could either stay on dsw.com with ½ or 50 percent probability or I could click out of the page and visit the second website listed, which is kohls.com. In turn, kohls.com exhibits the same probabilities as dsw.com, which illustrates the options of either staying on kohls.com with ½ or 50 percent probability or clicking out of the page and visiting shop.nordstrom.com, the third website listed.

Lastly, the third website listed, shop.nordstrom.com, contains one probability of clicking out of the page and visiting the first page listed, dsw.com, at 1/1 or 100 percent. The probabilities of executing any of the navigational options for all three of the listed websites is organized in the matrix below.

Figure A= $\begin{bmatrix} \frac{1}{2} & 0 & 1 \\ \frac{1}{2} & \frac{1}{2} & 0 \\ 0 & \frac{1}{2} & 0 \end{bmatrix}$

Kohls.com

Dsw.com Shop.nordstrom.com

Using this matrix, which for the purposes of my example I have called “Figure A,” I can simply start to calculate the ranking of my three websites based on sole probability, in a similar fashion to the original PageRank algorithm. The “Figure B” matrix multiplication shown below calculates the probabilities of my clicking on any one of the sites and then following through with

either staying on the website I chose or clicking away from the web page and onto another recommended website (Castillo, slide 24). However, it is good to note that the probabilities reflected below only correspond to the actions of the first, singular click onto any of the listed and ranked websites. Figure B is calculated through the matrix illustrated below:

$$\text{Figure B} = \begin{bmatrix} \frac{1}{2} & 0 & 1 \\ \frac{1}{2} & \frac{1}{2} & 0 \\ 0 & \frac{1}{2} & 0 \end{bmatrix} \begin{bmatrix} \frac{1}{3} \\ \frac{1}{3} \\ \frac{1}{3} \end{bmatrix} = \begin{bmatrix} \frac{1}{2} \\ \frac{1}{3} \\ \frac{1}{6} \end{bmatrix}$$

Matrix A

Initial probabilities of choosing each website

Figure C shown below is calculated just like Figure B shown above. The only difference in this matrix multiplication are the vectors being multiplied. Rather than multiplying Matrix A by the initial probabilities of choosing each website, Matrix A is now being multiplied by Figure B instead. Figure C is calculated through the matrix illustrated below:

$$\text{Figure C} = \begin{bmatrix} \frac{1}{2} & 0 & 1 \\ \frac{1}{2} & \frac{1}{2} & 0 \\ 0 & \frac{1}{2} & 0 \end{bmatrix} \begin{bmatrix} \frac{1}{2} \\ \frac{1}{3} \\ \frac{1}{6} \end{bmatrix} = \begin{bmatrix} \frac{5}{12} \\ \frac{5}{12} \\ \frac{1}{6} \end{bmatrix}$$

Matrix A

Probability of clicking on each website (Figure B)

-
-
-

Naturally, a common search for “blue ballet flats” would warrant more than three search results and one or two options per website. In current technological capacities, one Google Search can provide trillions of ranked and indexed results, which each including multiple links, calls-to-action, and subsequent child/transaction pages. This is what the ellipsis listed above is symbolic of. Figure C’s matrix multiplication is only the beginning of the calculations the PageRank algorithm completes instantaneously to provide the answers a keyword inquiry demands.

However, a ranking based solely off predetermined probabilities has its limits. Large multiples of iterations repeatedly calculated can start to converge and approach an infinite limit (Castillo, slide 25). In other words, the mathematics behind the PageRank algorithm cannot be the only factor contributing to the way a standard Google search displays the queried results.

If we revisit the example “blue ballet flats” keyword search, the PageRank of these three websites would be determined, using only the probabilities calculated above, as follows:

1. dsw.com (5/12)
2. kohls.com (5/12)
3. shop.nordstrom.com (1/6)

As clearly illustrated in the rankings above, there is a tie between the original PageRank algorithm’s calculation of dsw.com and kohls.com. According to the PageRank algorithm, there is no significant differences between the two websites, as they both sell the same “blue ballet flats” I searched for. Yet, dsw.com and kohls.com are drastically different ecommerce websites to the average shopper. These unaccounted-for attributes of what makes one user click on certain pages over other certain ranked pages is the difference between the original PageRank algorithm and the algorithm current users are accustomed to.

The PageRank Algorithm: Then Versus Now

What started as a new way to organize and quantify academic papers through hyperlinks (Dover and Dafforn 6) has now emerged into an exponential scale of organizing and presenting massive amounts of information. As witnessed in my "blue ballet flat" Google search above, a page ranking solely based on the linear algebra behind the scenes would lead to a series of converging results and frequent, unanimous ties. The page ranking of a modern query is more than just the organization and optimization of a series of hyperlinks and mathematical equations. The Internet simply has too much information to be able to accurately rank webpages for its users based solely on the results of matrix multiplication. Danny Dover and Erik Dafforn, the authors of *Search Engine Optimization Secrets: Do What You Never Thought Possible with SEO*, put it best, "there are hundreds of factors that help engines decide how to rank a page" (Dover and Dafforn 8).

The days of the traditional PageRank algorithm are obsolete. Hundreds, if not thousands, of minute factors play into the ranking of the "blue ballet flats" or "movie times near me" that the average consumer frequently searches for. The original hyperlinks are only a small fraction of the equation. A page ranking is so much more than just the numbers and figures.

So, if it's not just the algorithm, then what factors do determine a page's ranking? And, how are these additional, newer factors weighted compared to their previous counterparts?

To gain a deeper understanding of the page ranking process, I'm going to make the comparison between a website and a piece of real estate, like a house let's say. You've lived in your home for almost six years when suddenly, your spouse gets a new job. You and your family need to move into a new neighborhood as soon as possible, but you need to sell your current house first. Naturally, you put your house on the market for the price you think it deserves, and

unfortunately, you get no bids. You then decide to try a new plan. You make some small renovations, drop the price, take lots of pictures, and update your house's listings on popular home search websites. Now you start to see some interest in your property. You consider your property's other attributes: your neighborhood, your school district, your property tax rates, and so forth. At the end of the day, multiple factors contributed to the sale on your property. Ultimately, the Page Rank algorithm works in the same way.

Your website is a piece of real estate. Why? Because you want frequent user engagement and high bidding; you want your website to sell and become highly recognized through its page ranking. A house that is ranked 343rd on Zillow will never sell. Unfortunately, a web page listed on the third page of a Google search won't sell either.

Like your house, a web page depends on more than just a set price to attract users to the property. Instead of comparing property taxes and mortgage rates, the querist wants to find the most helpful pages to their situation in the smallest amount of time. In turn, the Google Search Engine wants to provide the querist with the most suitable and relatable answers to their question. The Google Search Engine needs to match the query with its answer. And, it does so through a series of both on-page and off-page ranking factors.

Both on- and off-page ranking factors severely weigh in on a page's precise ranking in the Google Search Engine, if not also in the other popular search engines on the Internet. Thus, "on-page ranking factors can have a big impact on your page's ability to rank if optimized properly" ("On-Page Ranking Factors"). On-page ranking factors focus solely on a website or web page's specific attributes that contribute to its search engine ranking, while off-page ranking factors consider the features spanning just outside of a page. In total, "Google uses about 200 various factors to rank a site" (Grabowski). 200 various factors that were non-existent in the

original PageRank algorithm. These on- and off-page ranking factors include, but are not limited to, the following:

On-Page Ranking Factors-

- Content of the Page (Keywords, Length, Duplicate Content, Keywords in Headings, Content Update)
- Keywords in the Title Tag
- Keywords in the Meta Description Tag
- The URL Structure
- Image Alternative Text
- Internal and External Links
- The Sitemap of the Website
- The Mobile Optimization of the Website

Off-Page Ranking Factors-

- The Number of Linking Domains and Linking Pages
- Link Relevancy
- The Diversity of Link Types
- Contextual Links (Grabowski)

Naturally, the list above is not inclusive of all the factors Google regularly uses to calculate if dsw.com comes before kohls.com in my search for "blue ballet flats." Rather, this list defines some of the important factors the algorithm heavily considers as it computes the page rankings for the retrieved pages. The mathematical weights associated with these factors are challenging to calculate precisely in the modern search engine. Instead of content stuffed with keywords, links, or extraneous information, the modern PageRank algorithm values good content and site organization above all else. "The content of a page is what makes it worthy of a search result position. It is what the user came to see and is thus extremely important to the search

engines" ("On-Page Ranking Factors").

Of course, the list above proves that the PageRank algorithm considers more than just content and defined keywords. Links, website structure, image alternative text, mobile optimization, and domain structure all play a significant role in the page ranking process (Grabowski). Yet, this does not imply that the other factors' significance is any different than those listed above. All 200 on- and off-page ranking factors significantly impact the current PageRank algorithm. Their levels of significance and direct level of influence on the page ranking of a website is the quantity that matters the most.

Additionally, these on-page and off-page ranking factors can be separated and labeled by two common categories: relevancy and popularity (Dover and Dafforn 8). These categories efficiently combine the on-page and off-page ranking factors into two overlaying metrics that explain the common tendencies of the current PageRank algorithm. Let's take a deeper look into the popularity category first.

According to Dover and Dafforn, "To rank number one for any given query you need to have the highest amount of total popularity on the Internet" (Dover and Dafforn 8). Thus, your website needs to be popular. However, this popularity is not split by football players and nerds. Rather, it is categorized into two main types: domain popularity and page popularity. Domain popularity is popularity attributed to the website domain and external links that contribute to your specific web page. Wikipedia is a good example of a domain with significant popularity. In contrast, page popularity is attributed to the ranking of the specific web page. For example, a page on WordPress or a popular Buzzfeed quiz that determines whether you love fettucine alfredo more than you love people.

The graph below is a strong example of how both domain and page popularity influence

the PageRank of a website or a specific web page. In the graph, domain popularity and page popularity are outlined in different colors, so you can decipher the influence each has on the respective pages. See Figure D.

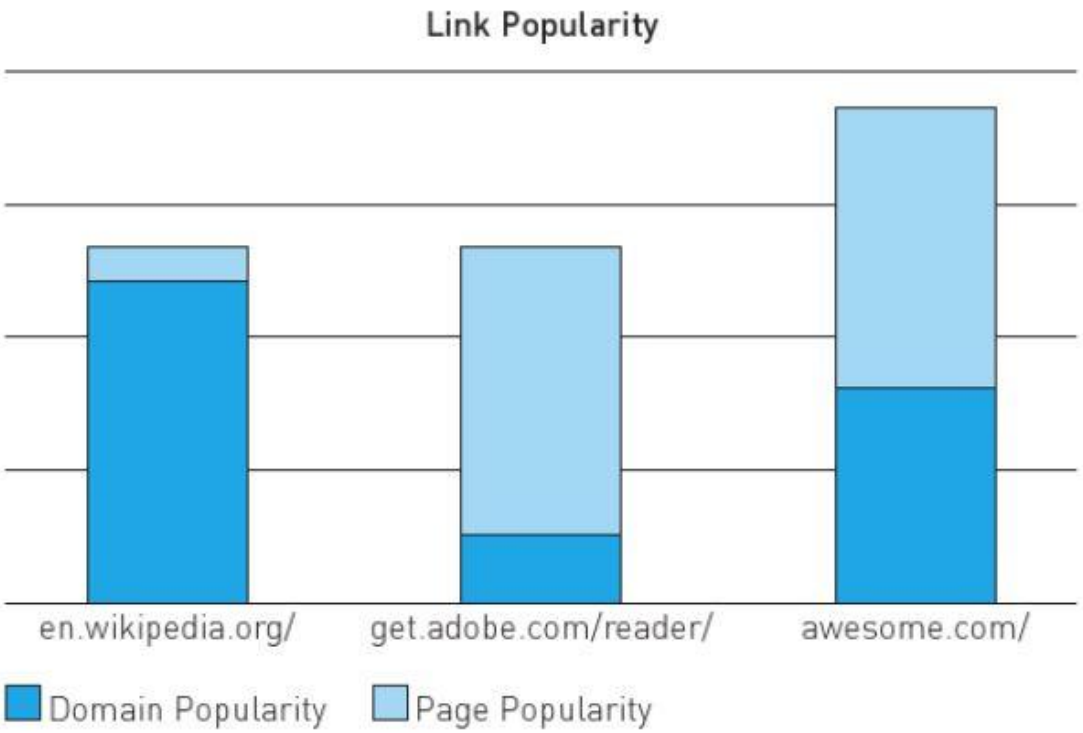


Figure D (Dover and Dafforn 9)

Figure D above shows the stark contrast between the influences between domain popularity and page popularity on a page's overall ranking. In this graph, en.wikipedia.org/, get.adobe.com/reader/, and awesome.com/ are all websites with varying levels of domain and page popularity. Yet, as seen in the image, neither sole domain popularity or sole page popularity makes the pages stand out. The well-rounded mixture of the two is what makes awesome.com/ more popular, and higher ranking, than either of the other two websites/web pages. A well-rounded individual is more marketable and sought after by companies looking to hire. Likewise, a well-rounded website is more marketable and sought after by the average querist.

Yet, a well-rounded website is not complete without an element of relevancy. In other

words, a popular page must be a relevant page, as well. Dover and Dafforn describe relevancy as a crucial part of any page ranking equation:

> In the previous section, I discussed how popular pages (as judged by links) rank higher. By this logic, you might expect that the Internet's most popular pages would rank for everything. To a certain extent they do (think Wikipedia!), but the reason they don't dominate the rankings for every search result page is that search engines put a lot of emphasis on determining relevancy. (Dover and Dafforn 11)

It is easy to assume that the pages ranked the highest on a Google search are the most popular. Sure, that could be true. The pages that correspond to your search for "blue ballet flats" could be the most popular pages for ballet flats or for shoes. However, the pages need to be relevant also.

A relevant page is a page with adequate content. According to Dover and Dafforn: "Relevancy is the measurement of the theoretical distance between two corresponding items with regards to relationship. Luckily for Google and Microsoft, modern-day computers are quite good at calculating this measurement for text" (Dover and Dafforn 11). In other words, relevancy is a measurement of how well the queried keywords match up with the content of the website or web page. Can the exact keywords be found? What is the ratio of keywords to other text? These are the ultimate questions that determine a page's relevance to the user.

Matching text for text is something the computer and the algorithm can accomplish quickly. That's why many users will try different searches or queries if they don't find an immediate answer to their question. A different grouping of words will retrieve and rank a completely different set of web pages, all of which will be relevant to the new keywords. Additionally, text is the easiest medium for Google to decipher, since "it takes less computing power and is much simpler programmatically to determine relevancy between a text query and a

text document than it is between a text query and an image or video file" (Dover and Dafforn 11).

Besides the accessibility purposes, this is the reason why alternative text on images and videos are important. Not only will it help those who cannot physically view the images and videos, but it also helps the PageRank algorithm pull relevant files to your search queries. Naturally, however, content stands at the forefront of ranking relevancy. A page needs good content to rank both popularly and relevantly. Together, popularity and relevancy "make up the bulk of Search Engine Optimization theory" (Dover and Dafforn 14). Yet, other factors can equally contribute to a page's ranking outside of the domain or creators control.

Naturally, the Google PageRank algorithm has not stayed the same since its creation in the 1990s. Rather, "Google changes its search algorithm around 500-600 times" ("Google Algorithm Change History") per year. Although most of these changes do not majorly affect the way the PageRank algorithm retrieves and ranks pages, "Google occasionally rolls out a 'major' algorithmic update (such as Google Panda and Google Penguin) that affects search results in significant ways" ("Google Algorithm Change History"). To serve as an example of the amount of updates Google makes to its PageRank algorithm, Figure E shows a list of the confirmed Google updates for 2018:

Confirmed Google Updates in 2018	**Date of the Update**
"Medic Core Update	August 1, 2018
Chrome Security Warnings	July 24, 2018
Mobile Speed Update	July 9, 2018
Video Carousels	June 14, 2018
Snippet Length Drop	May 13, 2018
Unnamed Core Update	April 17, 2018
Mobile First Index Roll-out	March 26, 2018

Zero-result SERP Test	March 14, 2018
"Brackets" Core Update	March 8, 2018

Figure E ("Google Algorithm Change History")

Although not all these algorithm updates are major, the "Core Updates" listed above in Figure E had significant impact on the pages that rely on the niches of the PageRank algorithm to gain web traffic and leads onto their sites. Yet, those at Google shy away from announcing their updates until the search engine optimists and data analysists see their rankings start to fluctuate. For, a sudden change in the PageRank algorithm makes companies who rely on page rank for marketing purposes extremely susceptible.

In addition to these smaller, frequent changes in the PageRank algorithm, Google occasionally implements major updates and changes to its PageRank algorithm. Three dominant updates of this caliber are Google Panda, followed by Google Penguin and Google Hummingbird, respectively. These three targeted different aspects of the existing PageRank algorithm in 2011, 2012, and 2014, respectively. Naturally, there have been more than just three major updates to the PageRank algorithm since its launch in the early 1990s, with Google continuously updating the updates to accommodate new advancements like mobile searching and voice searching. However, to simplify the comparison, I have chosen to focus on the three baseline updates attributed to Google's PageRank algorithm. The Google Panda, Google Penguin, and Google Hummingbird updates are detailed in the comparison chart listed below. See Figure F.

Google Panda Released on February 23, 2011	**Google Penguin** Released on April 24, 2012	**Google Hummingbird** Released on September 26, 2013
Google Panda sought to "reward high-quality websites and diminish the presence of low-quality website's in Google's organic search results" ("Google Panda")	The Google Penguin update was regarded as "a new effort to reward high-quality websites and diminish the search engine results page (SERP) presence of websites that engaged in manipulative link schemes and keyword stuffing" ("Google Penguin")	The Google Hummingbird update incorporated "a complete overhaul of the core algorithm," that "signaled Google's commitment to an increasingly sophisticated understanding of the intent of searchers' queries with the goal of matching them to more relevant results" ("Google Hummingbird")
Triggers for Panda • Thin Content • Duplicate Content • Low-Quality Content • Lack of Authority/Trustworthiness • Content Farming • Low-Quality User-Generated Content • High Ad-to-Content Ratio ("Google Panda")	**Triggers for Penguin** • Link Schemes • Keyword Stuffing ("Google Penguin")	**Results of Hummingbird** • Conversational Search • Human Search • Voice Search • Local search improvements (Pedraza)

Figure F

As seen in Figure F, the Google Panda, Google Penguin, and Google Hummingbird updates focus mainly on rewarding the websites who actively practice search engine optimization (SEO) in meaningful and practical ways. In turn, all four updates sought to weed out websites deemed as low quality in terms of their content and their links. These websites, taking away ranking from the websites trying to optimize in the correct and professional manner, were penalized by the new system updates. They were no longer allowed to cheat the system to get the page ranking and results they wanted. Content remains as king in the worlds of page ranking and search engine optimization.

Keywords, Keywords, Keywords

Throughout the PageRank algorithm's 28-year history, content has remained at the heart

of the algorithm's ranking strategy. From its initial eigenvector roots to the recent Google Maccabee update, the PageRank algorithm has held content and keywords to its highest standards, catering to those who optimize correctly and penalizing those who produce subpar content for the sake of results. Ultimately, content matters. The heart of SEO lies in the optimization of content and keywords. Without strong and lucrative keywords, the content of any web page would become lost in the sea of the trillions of web pages, images, videos, and documents all crawled and indexed into the Google Search Engine. Stemming from content, keywords also matter. This section serves as a deeper analysis on the simple words and phrases that have reinvented the information retrieval process and recreated the SEO we know and love today.

Search engine optimization (SEO) lies in the hands of small phrases and word groupings commonly known as keywords, which constitute the "ideas and topics that define what your content is about" ("What are Keywords?"). In other words, "if you boil everything on your page—all the images, video, copy, etc.—down to a simple words and phrases, those are your primary keywords" ("What are Keywords?"). And, these primary keywords and phrases have shaped information retrieval and product marketing into the competitively fast-paced, ever-changing race to the top of the PageRank algorithm's ladder.

Think of keywords as the entrance to Rapunzel's tower. Her tower, your isolated kingdom of processed information and the PageRank algorithm, are guarded by search queries, her evil step-mother. Googling for any combination of words and phrases will produce results. You will be let into the entrance of the tower. However, the number of times you ask her to let down her hair, the retrieval and ranking of your queried results, will depend on the keywords you decided to use. After all, you can't get to Rapunzel if she never lets down her hair!

Naturally, however, there is no right way to save our damsel in distress. Search queries and keywords can be a combination of simplistic and short words or more complex phrases that take on a sentence-fragment-like-structure. Some people even type full sentences into a search engine to ask for information! According to Damon Ridley, the author of *Information Retrieval: Searching in the 21st Century*, "Broad search approaches or lack of knowledge tend to lead to simplistic searches while a narrow approach and searching experience lead to complex searches" (Ridley 74). In simpler terms, the number and context surrounding the keywords you type into a search query dictate how a search engine, and perhaps a data analysist, view your searching habits. Are you someone who will write more words in a search query to narrow down your results? Do you type in single-word phrases and continue trying different ones until you find the results you were looking for?

The screencast video, Figure G, provided below explores a deeper analysis into the concept of keywords and their direct impact on modern information retrieval processes. In the video, I will explore different keyword, content, and ranking strategies using the "blue ballet flats" example mentioned earlier in this chapter.

Figure G (https://www.youtube.com/watch?v=3MwMEhbYtXw)

Thus, keywords are important “because they are the linchpin between what people are searching for and the content you are providing to fill that need” (“What are Keywords?”). The grouping of words you decide to use with the intentions of retrieving and gathering a specific set of information provides context for the digital marketing specialist and the PageRank algorithm alike.

A content strategist seeks to take the keywords people most frequently use to find their pages and optimize the keywords in a meaningful way to their business (hence search engine optimization). Similarly, the PageRank algorithm matches searched keywords, based on more than just the keywords of course, to the identified keywords of a page’s content and retrieves and ranks accordingly. Small grouping of words and phrases have reshaped the way the world searches and perceives information. These same words and phrases have redefined the advertising and marketing industries we know today. We are no longer the princes stuck at the bottom or at the gate of the castle. Instead, we use our knowledge, our keywords, to climb our way to the top of a search engine’s rankings.

This chapter has served as an exploration of the modern search engine, specifically the Google Search Engine. From its origin as a simple eigenvector in 1990 to its complex PageRank algorithm, the Google Search Engine has evolved into a necessary component of today’s world. Its processing capabilities and tree-type hierarchical basis make it a leader among other competing search engines, and its system cannot be paralleled. In a world full of data and readily accessible information, the Google Search Engine is a leading force, ready to adapt and change to the keywords, on-page and off-page ranking factors, and updates in the future. In other words, what started as an index for academic paper and journals is now a common force that can answer our questions with just a click of a button. How amazing is that?

The next chapter of this narrative on the Google Search Engine will focus primarily on the Google Analytics software available to anyone looking to deeply analyze their pages' rankings and popular keywords. Within this section, I will reflect on my experience with the Google Analytics certification process, as well as speculate this software's recent popularity and current uses. For, the Google Search Engine produces a lot of data that should not be ignored. Welcome to Google Analytics, a software ready to take the information from the Google Search Engine and parse it into tangible results.

Chapter II: An Examination of the Google Analytics software

A New Age of Data

No analysis of the Google Search Engine or the Internet would be complete without a discussion of the data that is collected behind the scenes. This data, also commonly referred to as "big data" or "new data," acts to represent those who use frequently use smartphones and tablets; those who often visit websites. With every visit to a website, every online transaction, every Google search, even every trip to the grocery store, businesses and companies collect data about you. Essentially, they profile you. They take an interest in knowing who you are, using your information to maximize their sales or boost their search ranking results.

Kenneth Cukier and Viktor Mayer-Schönberger, authors of the essay, "The Rise of Big Data: How It's Changing the Way We Think About the World*"* describe the recent rise of big data as a transformative trend:

> Big data starts with the fact that there is a lot more information floating around these days than ever before, and it is being put to extraordinary new uses. Big data is distinct from the Internet, although the web makes it much easier to collect and share data. Big data is

> about more than just communication: the idea is that we can learn from a large body of information things that we could not comprehend when we used only smaller amounts. (Cukier and Mayer-Schönberger 20)

Regarding the Google Search Engine, big data is exactly what Cukier and Mayer- Schönberger describe it to be: something that is only comprehensible in large amounts. On an individual level, your data is not the sole foundation of the most commonly searched keywords for the month of November or the basis for Krispy Kreme's latest doughnut campaign. Rather, your data falls among many of those who have similar interests to you, those searching for the same answers that you are.

Think of big data as a trail of breadcrumbs that your digital devices leave behind every single time you use your smartphone or look up "how to cook chicken in a crockpot" on Google. Your information (your gender, your age, your device's location, the keywords you searched, the type of device you searched upon, etc.) are all breadcrumbs that are left behind on a website once you make your way to that specific company's page. As breadcrumbs form a single piece of bread, big data can form a demographic of users who both target and are targeted by the companies and businesses involved in a rapidly emerging and transforming industry.

With this data, companies and businesses can create or analyze the demographics of clients supplying their income. According to Cukier and Mayer-Schönberger, "once we datafy things, we can transform their purpose and turn the information into new forms of value" (Cukier and Mayer-Schönberger 27). For example, the beer company, Budweiser, would not be advertising its product to a demographic of 15- to 18-year-old girls, as the makeup company, COVERGIRL, would not be advertising its products to a demographic of 40- to 45-year-old men. Instead, both Budweiser and COVERGIRL could use the data collected from its consumers

to create a probable demographic to consider implementing throughout their next marketing campaign or product launch.

So, the industry now has this data. They hold collections of user information at their fingertips. What steps could they take to turn your searching habits into a demographic work of art? This is where revolutionary data analysis software comes into play.

Piecing Together the Puzzle

As American computer programmer and science fiction writer Daniel Keys Moran once said, “You can have data without information, but you cannot have information without data” (Spotfire Blogging Team). In a world full of quick texts, emails, notifications, shares, and updates, it is almost impossible for the average person to keep track of their data-driven activities, both on and off the Internet. To make sense of this seeming anomaly, let’s aggregate the data into a reasonable perspective.

I would like you to take a moment to pause in your reading of this document and try to think about how many times you used a search engine yesterday to search for an answer to a question or comment you had. Personally, I searched for 24 keywords or phrases using the Google Search Engine. Now, take that number and add how many times you clicked on a link to a website, either through a link or an advertisement or a social media page. It’s hard to keep track, isn’t it?

The graph shown below in Figure H serves as a visual representation of the significance, magnitude, and power search engine data has on all our individual lives, every single day.

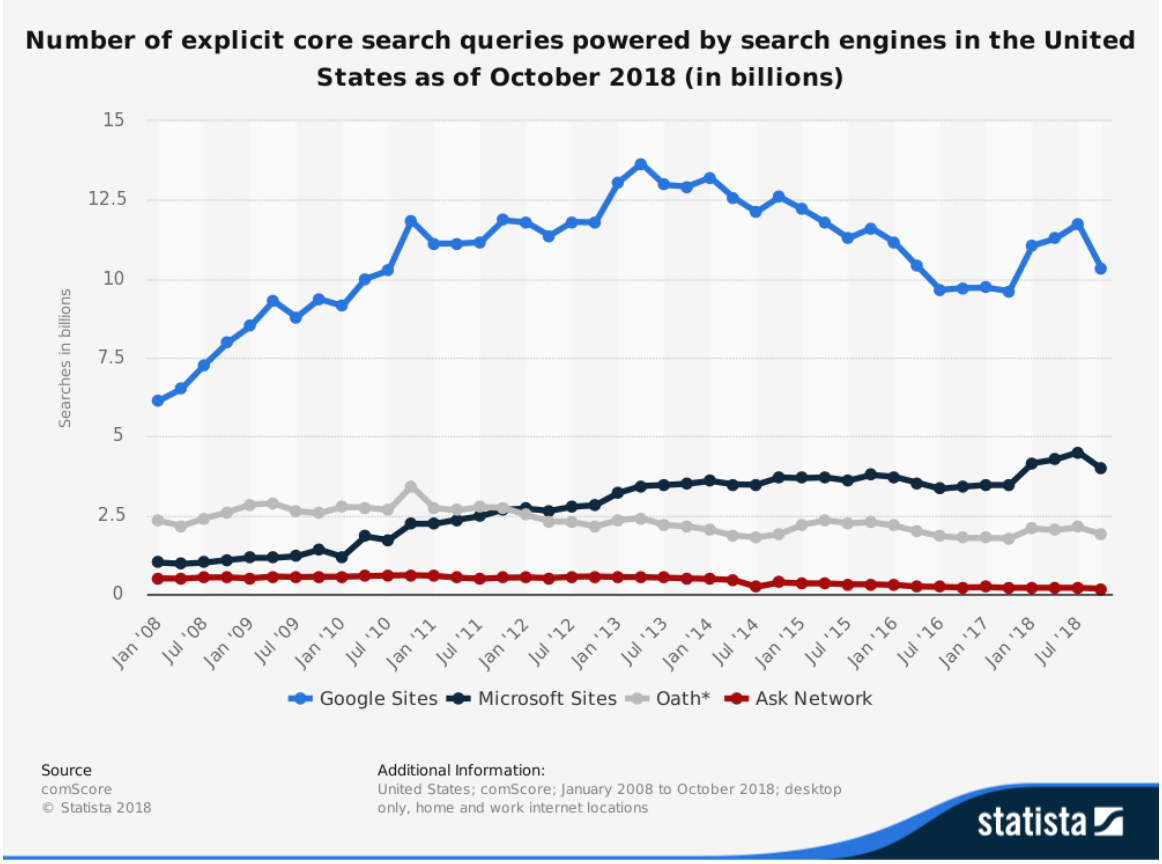


Figure H (comScore)

As seen in Figure H, in October 2018, there were approximately 16.39 billion core search queries performed just in the United States alone, with Google sites and search engines accounting for approximately 10.34 billion (or 63 percent) of the core search queries in October 2018. If we continue to break down this graph further, 16.39 billion core search queries turn into approximately 0.54 billion (500 million) core search queries daily, 0.023 billion (23 million) core search queries hourly, or 0.00038 billion (0.38 million) core search queries per minute. However, this data is only representative of one month of search querying in the United States, which, as see in Figure H, fluctuates based on the time of the year and the advancement of the search engines. Could you imagine this on a global scale?

In addition to the quantity of search queries any individuals complete in any given day, month, or year, the quality of the core search queries matters, as well. In other words, what we—as consumers and web users and inquisitive individuals—search for on the Internet defines our current culture. The keywords we type into any given search engine during any given query embody our individual morals, questions, and beliefs.

Google Trends, a Google-based website dedicated to collecting and providing popular keywords for any category over the past five years, keeps track of the global climate through the keywords and searches the world commands. Within the websites, a curious query enthusiast or a professional in the marketing industry could easily look and decipher that Megan Markle was the most searched person in the world in 2018, while the World Cup was the most popular news search in 2018 ("Year in Search 2018"). These trending and frequent searches not only provide quantitative data to those interested in the previous year's search statistics, but also the qualitative data that could possibly correlate to the search trends Google has publicized, ultimately defining the culture surrounding previously trending search queries.

The cultural climate these popular search queries reside in is also known as search engine culture, which is defined by the trends and tendencies of the modern society. In general, search engine culture showcases and advertises the interests and emotional appeals of the current consumer. According to Alexander Halavais, author of the book *Search Engine Society,* "The search engine, far from being an isolated modern artifact, represents a touchstone of digital culture, and a reflection of the culture in which it exists" (Halavais 13). Likewise, Google Trends matches search engine culture to its search engine queries in a seamless fashion.

As a prominent example of search engine culture, the video below, Figure I, is Google's "Year in Search" video, which mixes the cultural phenomena of 2018 with Google's data to

create a cumulative perspective of today's most influential topics and trends. See Figure I.

Figure I (Google) (https://www.youtube.com/watch?v=6aFdEhEZQjE)

As seen in the video in Figure I, Google correlates its most popular searches or keywords to the events, viral videos, and other phenomena a modern society finds emotionally appealing. Instead of solely quantifying search engine queries by their statistical purposes, Google strives to push beyond the algorithm and statistics to add a humanistic element to something that will never be human itself, but rather instead, fueled by humans with innumerable questions, purposes, and desires.

Of course, along with search engine culture comes search engine diversity. In other words, all search queries are diverse. The exact phrasing of a query will be almost unique to the person behind the screen. Think about it for a second: there are billions of searches conducted per day that deviate from one another, and there are even more that have never been searched before.

If we combine search engine culture with search engine diversity, these concepts develop a well-rounded interpretation of not just the most popular keywords and phrases, but also of the

people who eventually search for them. The search query may be different for two people who are essentially searching for the same information. Yet, Google treats this information as a part of the definitive whole. In other words, Google treats all queries as equal. It processes them, analyzes them, and ultimately uses them to create the data that the digital marketing industry currently craves.

Thus, the data is there, waiting to be harnessed and analyzed by those who are willing to dig deeper into the numbers and statistics. Inevitably, every single person who performs a search query or visits a website in search of "blue ballet flats" is creating data: data on their location, data on their active session, data on their transaction, data on their interests, data on their preferred products and brands. From the actual search engine to the culture and diversity surrounding it, data is everywhere, ready to be aggregated and analyzed.

But, how does one even begin to start sifting through (potentially millions) of rows of keywords and data successfully? That's where data mining applications, like Google Analytics for example, come into play.

As a disclaimer, Google Analytics is NOT the only data mining application available for businesses, companies, and interested professionals to become acquainted with for their SEO and analysis purposes. I chose to focus on Google Analytics in my research due to its cost (free) and its growing popularity in the digital marketing industry.

Google Analytics is a data mining and analysis application created by Google to collect, configure, and report on those who most frequently visit your websites and/or applications and how they got there. With both free and paid versions available for various businesses and data-

driven individuals, Google Analytics "gives you comprehensive digital tools to help you better understand your customers and evaluate your site, content, and products" ("Product Overview: Analytics"). Without further ado, let's take a closer look into the free version of Google Analytics: a major stepping stone for anyone in the digital marketing industry to start becoming well-acquainted with their data.

Google Analytics: The Methods and the Madness

In recent years, Google Analytics has been at the forefront of the foundation for digital marketing. With the emergence of stronger data analyzation capabilities, companies and corporations have been searching for easier ways to harness and implement the data that drives their marketing and advertising campaigns. They seek the data that Google Analytics, along with many other paid data mining software, provide. To illustrate the increasing demand of data analysis software in commercial industries, Figure I shows the most popular tools used for market research (data analysis) in both 2017 and 2018. See Figure J.

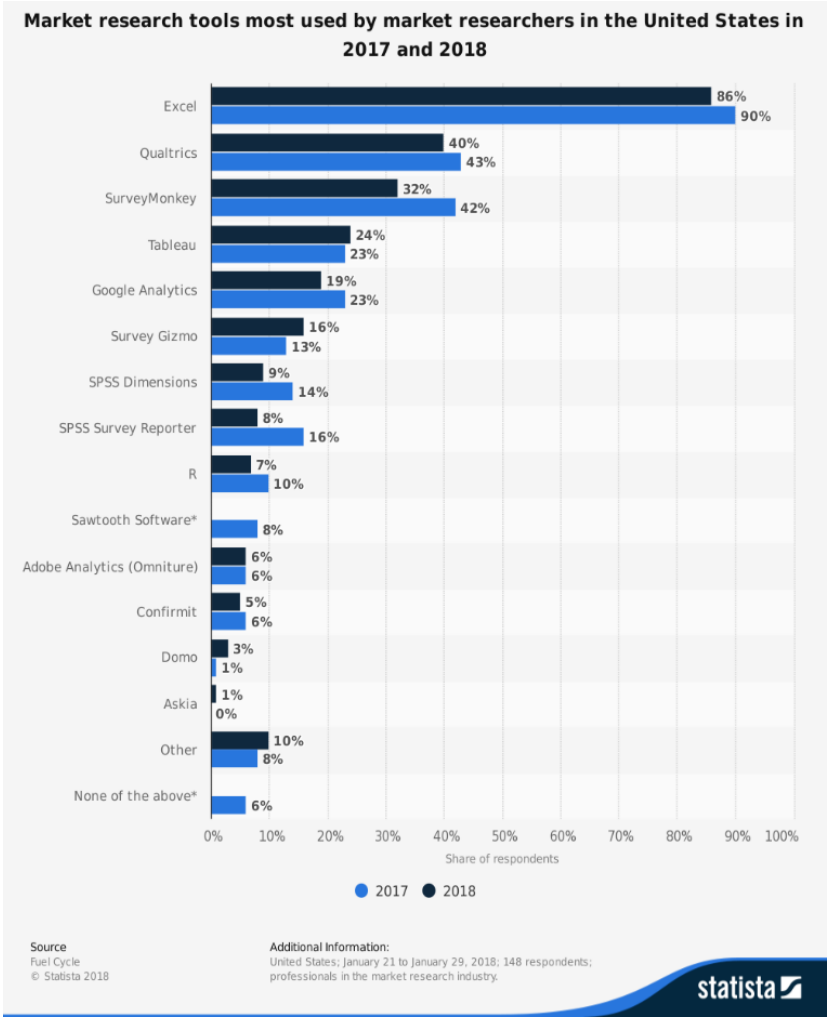


Figure J (Fuel Cycle)

As seen in Figure J, Google Analytics applications were used by 23 percent of market researchers in the United States in 2017, with a 19 percent usage in 2018. When compared to major market research tools, like Excel and Qualtrics, Google Analytics may seem minute or obsolete. However, its power and influence should not be ignored. The features and advantages of using the Google Analytics software to mine a company's data make the application a viable contender in the everchanging world of web analytics.

As I mentioned before, Google Analytics is a market research software included in the Google Marketing Platform in both free and paid forms: Google Analytics and Google Analytics

360, respectively. Naturally, any business considering using either Google Analytics, Google Analytics 360, the Google Marketing Platform, or any other data analytics software should weigh out their options before choosing the software that works best to accommodate the size of their business and the amount of data they need to analyze. However, for this thesis and my research, I will be concentrating on solely the free Google Analytics platform.

The Google Analytics platform has many interesting features and data-processing techniques that drew me, a novice at web analytics, to its platform. At its core, "Analytics gives you tools to help you better understand your customers, so you can improve your website and drive better results" ("Product Overview: Analytics"). On top of its basic functions and reporting capabilities, Google Analytics offers novice and advanced users the opportunity to easily navigate its interface for easy analytics reporting. Naturally, I will not be detailing every single feature of the Google Analytics platform or experience. Rather, I will highlight the features that I think make the Google Analytics platform stand out to any entry-level web analysts or professional writers who may need to quickly learn how to incorporate statistics and keywords into their content. So, let's dive right in, shall we?

In my opinion, the Google Analytics software is sectioned into parts that help guide a new user successfully into its full implementation to collect data from a website, tablet, or mobile device. The first part of this process is educational, including four total courses on Google Analytics and the Google Analytics Individual Qualification (GAIQ) exam. Each course, "Google Analytics for Beginners," "Advanced Google Analytics," "Google Analytics for Power Users," and "Getting Started with Google Analytics 360," can be accessed through the Google Analytics Academy's website, https://analytics.google.com/analytics/academy/. Interested students and participants can view the courses' syllabi on the Google Analytics Academy's

website, as well as become acquainted with the professionals in the instructional videos. Naturally, it is logical to start with the "Google Analytics for Beginners" course and work through the remaining courses as you see fit to your situation. For reference, I have listed the four current Analytics Academy courses and a brief description of their contents in Figure K below.

Analytics Academy Courses	Description
"Google Analytics for Beginners"	• Explains the basics to newer users • Includes content on how to create an account, how to navigate the Google Analytics interface, and how to analyze basic reports/set up goals and campaigns ("Course Overview-Google Analytics for Beginners")
"Advanced Google Analytics"	• Details how data is collected and processed into reports • Incorporates specifics on configured data collection like Custom Dimensions • Describes advanced analysis techniques using different types of reports and popular marketing strategies ("Course Overview-Advanced Google Analytics")
"Getting Started with Google Analytics 360"	• Covers the basics of Google Analytics 360 • Specifies advanced features like Custom Funnels and Custom Tables • Notes content on other Google Marketing Platform products and Google Ad Manager ("Course Overview-Getting Started with Google Analytics 360")
"Google Analytics for Power Users"	• Builds on an advanced understanding of Google Analytics • Discusses techniques for analyzing valuable traffic sources, customizing channels, and improving overall ecommerce performance ("Course Overview-Google Analytics for Power Users")

Figure K

Within each Google Analytics Academy course, students will be introduced to topics and terminology through educational videos, interactive sessions, and quizzes to test their knowledge. Upon completion of each course, Google will issue the student a Certificate of Completion, which is valid until one year after its issue date. However, please note that only the courses “Google Analytics for Beginners” and “Advanced Google Analytics” are required and recommended to take the GAIQ, a 70 question, timed exam. Although the Google Analytics certifications are a reputable way to become acquainted with the world of web analytics, the GAIQ certification bears more weight in job interviews and among analytics professionals, and is, therefore, a recommended certification.

Once our analytics advocate graduates from the Google Analytics Academy, it is time to put the theories and terminology to the real test: the application of Google Analytics to the data of a website or mobile application. Fortunately, Google Analytics makes this process extremely user-friendly for those who do not understand website coding to its full capacity. Rather, Google Analytics provides its users with the tracking code to copy and paste onto any website or mobile application they desire to track. The tracking code will appear in a similar format to the screenshot featured in Figure L. See Figure L.

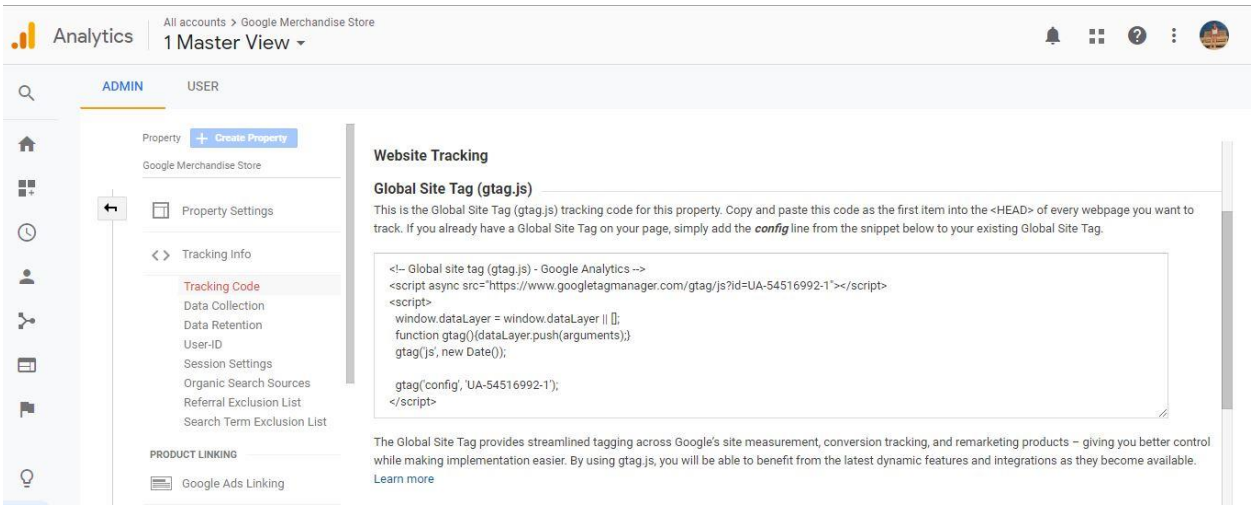


Figure L ("Admin-Website Tracking")

As seen in Figure L, Google Analytics provides its users with a specific tracking code correlated to a specific Google Analytics accounts. It is important to note that any other Google Analytics accounts that may be used to collect data will have a different tracking code assigned to them, and therefore, will consist of different sets of data.

Once our Google Analytics advocate enables the tracking code on all the websites she would like to track, it is time for her to really dive in and make the most of her Google Analytics experience. The Google Analytics application will begin collecting data in real-time from the day the tracking code is implemented on a website or mobile application. After it is collected, it is up to the analyst to configure, filter, and report on the data in a way that is most meaningful to her company. Fortunately, the Google Analytics software is extremely malleable to any company or individual's data needs.

Upon logging into a Google Analytics account, the user can expect to be greeted with a landing page of statistics and data that looks like the screenshot featured in Figure M. See Figure M.

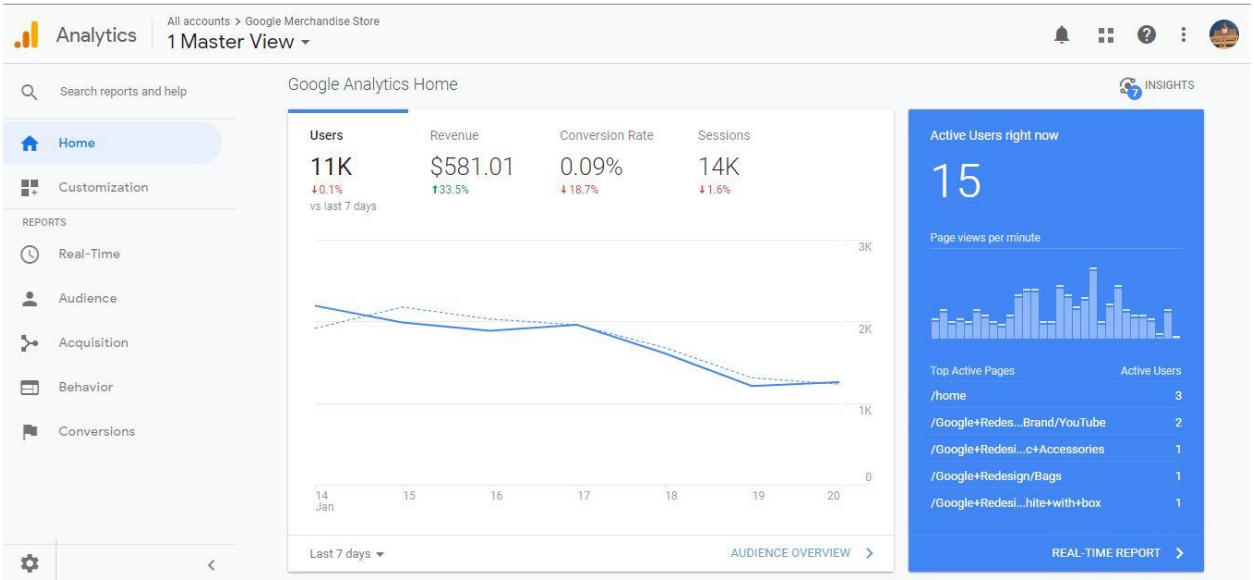


Figure M ("Google Analytics Home.")

The dashboard featured in Figure M is a customizable homepage for this demo Google Analytics account, which reports quick statistics on users, revenue, conversion rates, and sessions for the Google Merchandise Store. Naturally, however, this homepage is customizable and can be molded to report on the statistics or data that is most valuable to a specific company's needs.

As also seen in Figure M, Google Analytics offers further breakdowns of a business's data through the tabs located on the left-hand side of the dashboard. These tabs lead to different types of reporting through the Google Analytics software, which includes, but is not limited to the following types of reports:

- Reports using Real-Time data
- Reports using Audience metrics
- Reports using Acquisition metrics
- Reports using Behavior metrics
- Reports using Conversion metrics

Figure N illustrates the screenshot of what an Audience report dashboard could look like, as it is

arranged in this demo Google Analytics account. See Figure N.

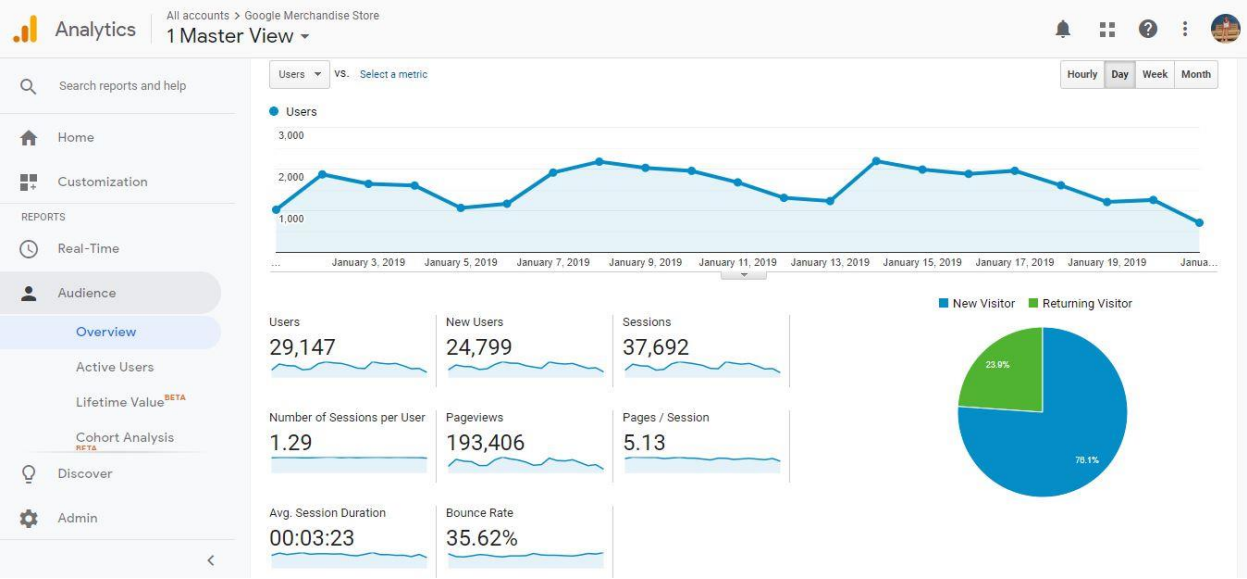


Figure N ("Audience Overview")

As demonstrated through Figure N, the Audience Overview report for this demo Google Analytics account includes different statistics and charts than the homepage dashboard. Fortunately, every report created by Google Analytics takes on this unique form. Customization is key to successful Google Analytics reporting.

In addition to the customizable report overviews demonstrated through Figures M and N, Google Analytics also offers its users a completely-customizable experience through its options featuring customizable goals and campaigns. With these options, the Google Analytics software allows its users to create custom goals and campaigns that filter data and results accordingly.

The screencast video provided in Figure O below explores the demo Google Analytics dashboard in an interactive fashion. In this video, I will be showcasing the customizable dashboard, as well as illustrating some of the features of the "Audience," "Acquisition," "Behavior," and "Conversion" tabs listed on the left-hand side of the platform.

Figure O (https://www.youtube.com/watch?v=e0AgB0SxNq8)

Of course, the process of graduating from being a Google Analytics amateur to a Google Analytics expert is not an easy milestone to reach. Regardless of the features, advantages, training courses, or customizable reports and dashboards, becoming sufficiently trained and certified in Google Analytics is not an activity to take with a grain of salt. In the next section of this thesis, I will describe my personal experience working through the Google Analytics certifications and the GAIQ, as well as the successes, struggles, and ultimately failures I faced throughout my tenure as a Google Analytics Academy student.

A Beginner's Guide to Being Certified in Google Analytics

As a disclaimer, my experience throughout the Google Analytics certification process is not representative of the experiences of others, past or present, who choose to enroll in the course to obtain certification. My individual successes and struggles are based on my learning capabilities and my limited e-commerce experience going into this process. The Google Analytics certification progresses on a different path and at a different pace for anyone enrolled.

Although this paper may suggest otherwise, at the start of this journey I considered

myself barely an amateur in the worlds of SEO and Google Analytics. I had exposure to both concepts, but I rarely ever considered their meanings or their direct impact on the career I have ultimately chosen as a professional writer/content developer. However, after noticing a growing commonality among the internship and job requirements of potential places of employment, I quickly realized that my professional writing degree was not enough to qualify me for the rapidly growing world of digital marketing. Phrases like "SEO," "PPC," "Google Analytics," "Google Ad Words," and "keywords" continued to follow me wherever I went. That is when I decided I needed to embark on this journey to become stronger and more self-aware of the industry than I ever was before.

Initially, I was extremely excited to start this journey with the Google Analytics Academy and the free version of Google Analytics software. Within the first two weeks of my summer vacation, I signed up for the "Google Analytics for Beginners" course and began my studies as a student enrolled in the Google Analytics Academy. The course was a smooth transition for me, someone who had decent amounts of experience cleaning, mining, and reporting on data through other reputable software. The total course took me about a week to complete, and I found the quizzes and interactive sessions to be helpful in learning this "new" information.

Immediately following my completion of the "Google Analytics for Beginners" course, I enrolled in the "Advanced Google Analytics" course, the second course in this adventure. Naturally, I set out to complete this course in a similar timeline to the previous class. Although the topics discussed throughout the tutorial videos, interactive sessions, and quizzes were much more in-depth, I felt confident in my ability to master the material and begin to correlate the concepts I was learning with the research I was doing. Until roughly the beginning of June, this

combination of research and Google Analytics courses complimented each other and quickly helped me to establish the sub-topics and categories I decided I needed to narrow this thesis into. Unfortunately, the beginning of June is when my focus and productivity began to slip away from me.

Maybe it was a combination of the summer sun and my grandparent's pool always calling my name. Maybe it was the limited amount of free time I had once I started babysitting and working full-time again at Krispy Kreme Doughnuts. Maybe it had to do with my 21st birthday falling in the middle of June. Whatever the case may be, I will admit that I successfully lost my focus. After completing "Advanced Google Analytics" during the first week of June, I decided to give myself a week break for getting half-way through the courses. I had the whole rest of the summer to get it done, right?

Welcome to August 6, 2018. With three weeks left until my senior year of college began, I started to panic. I still had two Google Analytics Academy courses to complete, along with information and research to find, and I hadn't even begun to think about buying my textbooks or shopping for the things I needed for transitioning from a traditional dorm room into a townhouse. That's when my natural college instincts kicked in; when there was a will, there was certainly always a way.

With two weeks of my summer vacation remaining, I signed up for the "Getting Started with Google Analytics 360" course, a requirement for my Data Analytics minor rather than a requirement for this project. I completed this course in roughly two days and immediately signed up for the fourth course "Ecommerce Analytics: From Data to Decisions," which is now listed as "Google Analytics for Power Users" on the Google Analytics Academy. Kicking my analytics capacity into overdrive, I also completed this course in roughly two days, while tying up some of

the loose ends of my research I had started over the summer. Nonetheless, the last few weeks of the summer were some of the toughest weeks I encountered throughout this journey to learn all the ways of the ecommerce world and the data driven industries.

Looking at the four courses from an unbiased perspective, I would rank the first two lighter and easier to complete than the following two courses. Although my learning environment and focus while completing the last two courses were less than ideal, they do not require full completion to take the GAIQ. And, I think that those who create and produce the Google Analytics Academy training program have that same mentality in mind when drafting and releasing new study materials for its prospective students. Both "Google Analytics for Beginners" and "Advanced Google Analytics" cover topics and discussions on how to properly integrate Google Analytics into a blog, website, or small business. These two courses are specifically designed for the amateur analysist who wants to learn more about Google Analytics and data-driven decision-making processes. The latter two courses, however, are not.

"Getting Started with Google Analytics 360" and "Ecommerce Analytics: From Data to Decisions" ("Google for Power Users") are specifically focused courses designed to educate those who are already well-immersed into the data and analysis of their respective industries. Since Google Analytics 360 is the paid version of Google Analytics, it is only available to businesses and companies that qualify to use the software. Additionally, not every company or business uses Google Analytics to track their conversion rates and specify their marketing goals. Some just use it to analyze keywords, page visits, and average user sessions. Since I fall into this second category of users for the time being, I highly attribute my lack of current business and ecommerce trends to my struggles with learning the materials incorporated into these courses.

Nonetheless, with four Google Analytics certificates in hand, I embraced a new semester

ready to take on the classes, projects, and exams I had ahead of me. Yet, there was something that seemed to be missing, maybe something that I forgot to complete over the summer, but I could not exactly pinpoint what it was. After the first two weeks of the semester, it finally hit me like a brick: I forgot to take the GAIQ.

As I mentioned in the previous section, "Google Analytics: The Methods and the Madness," the Google Analytics Individual Qualification (GAIQ) is a free 70-question, timed exam that is more reputable to potential employers than the Google Analytics certifications themselves. To qualify to take the GAIQ, one must complete both "Google Analytics for Beginners" and "Advanced Google Analytics" courses. And, that is it. Then, at least according to the Google Analytics Academy, one is fully prepared to take this exam. So, with my knowledge in hand and my certificates by my side, I signed up to take the GAIQ.

After I answered the last question of the GAIQ, I had discovered that I had failed the exam. I was more shocked than surprised at this outcome. Sure, I completed the courses, but as the test suggested, I was still an amateur at using the Google Analytics software. Naturally, I attributed this failure to the pace at which I completed the courses and the amount of time that fell in between my completion of the courses and my attempt at the GAIQ. Yet, regardless of my personal recognition of my procrastination, I became extremely apprehensive to take the exam again. Late December was my chance to redeem myself and my GAIQ exam score.

After studying relentlessly for a few days and knowing what to expect the second time around, I passed the GAIQ and officially became certified in Google Analytics. Reflecting on that process now, it is hard for me to fathom just why it took me such a long time to take and pass the GAIQ. Was I nervous to take the exam? Did I feel unprepared or ill-equipped to pass? Was I just pure lazy?

My fear of failing the exam for a second time was the leading factor in my apprehension, without a doubt. I was not lazy, nor was I unprepared. I was scared. It was as simple as that. The Google Analytics Academy makes the GAIQ seem like a breeze, implementing the "if you can pass this, then you can certainly pass that" mentality throughout its courses. However, every website or blog I read leading up to the first time I registered for the exam described the exact opposite. Most of those web analytics enthusiasts had spent weeks or months preparing for the exam whereas I had only spent a maximum of two weeks over the summer "preparing," if you could even consider it that. I felt inferior to the GAIQ, and thus, I waited until the last minute to retake the exam. Luckily, I passed on my second try.

At this point, you might be feeling scared or apprehensive about becoming Google Analytics certified or about taking the GAIQ for yourself. And, that is perfectly okay. Like any other college course offered on any other college campus, "Google Analytics for Beginners" or "Advanced Google Analytics" get harder as the topics become more complex; the exams are challenging but not impossible; and practice makes perfect. Still feeling a bit apprehensive about the whole Google Analytics certification process? The figure below is a checklist that I have created based on my experience with the Google Analytics certification process and the GAIQ exam. See Figure P.

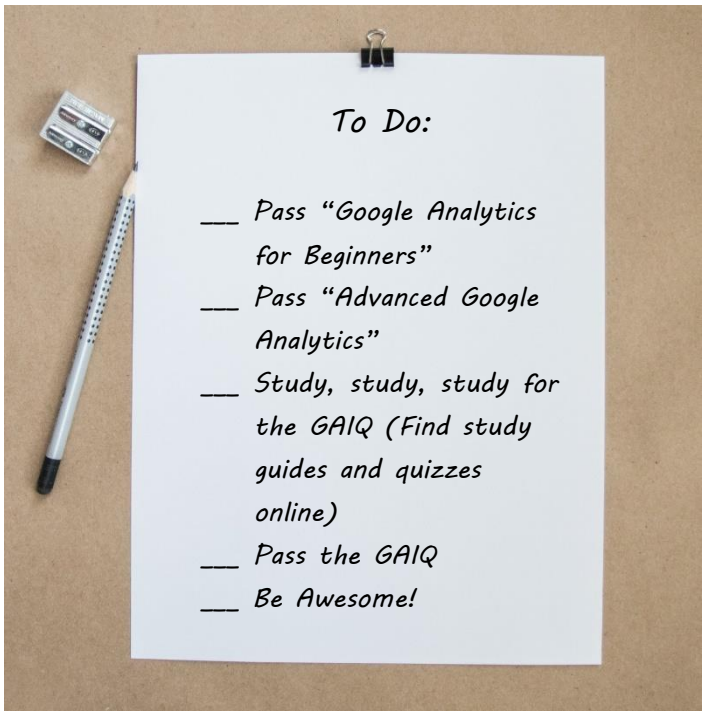


Figure P

See, it's not as bad as it seems, right? Just believe in yourself and your ability to learn Google Analytics, and you can do anything.

But what's the fun in learning how to implement the Google Analytics application, proper SEO techniques, keywords, and content creation techniques without being able to utilize them in a real-world, business setting? The next, and final, chapter of this narrative will reflect specifically on my hands-on experience of my research through my internship at The JDK Group/ Allenberry Resort in Camp Hill, Pa. Within this section, I will focus on what I learned as a Content Writing, Social Media, and Public Relations intern with The JDK Group/Allenberry Resort, as well as showcase some of the publications I created using a combination of my research and creativity. Without further ado, let me introduce you to The JDK Group/Allenberry Resort: a catering and special events company significantly growing within the current digital marketing industry.

Chapter III: An Examination of the Current Digital Marketing Industry

A Worthwhile Weekend Getaway

"Well it's kind of a wedding company, and a catering company, and a special events place… But, it looks really awesome!" I said to my parents when I tried to describe to them where I would be interning during my Fall semester. After a tough patch of luck navigating through the internship application process, I was offered a position as a Social Media, Public Relations, and Content Writing Intern at The JDK Group in Camp Hill, Pa. As excited as I was to work for a wedding, special events, and catering company, I truly had no idea what to expect. Would I be buying coffee every day? Would I be applying my SEO knowledge in a real-world setting? After my first day, it certainly did not take me long to completely figure The JDK Group out.

As I mentioned before, The JDK Group is at the forefront of the hospitality industry in Camp Hill, Pa. In addition to catering and special events, The JDK Group has an in-house floral design team and on-staff wedding planners to make-up a one-stop shop for all your event planning needs. To add to its extravagance, The JDK owns three exclusive venues (wedding venues) and takes on the marketing for external clients, like Allenberry Resort.

On my first day as a Content Writing, Public Relations, and Social Media intern for The JDK Group, I started by familiarizing myself with the four different brands of the three exclusive venues and The JDK Group's personal brand. After finishing that, I moved onto reading several articles about SEO, keyword optimization, and content optimization. My supervisor explained to me that my first few tasks were going to be creating various blog posts for these four different brands. Naturally, creating these blog posts included more than just scripting content and picking out corresponding pictures. This was finally my chance to start incorporating some of the SEO

tips and tricks I had gathered throughout my research into a real-world setting.

My first blog post for The JDK Group is the one pictured and linked in Figure Q, "An Elegant Venue for All Occasions, Historic King Mansion."

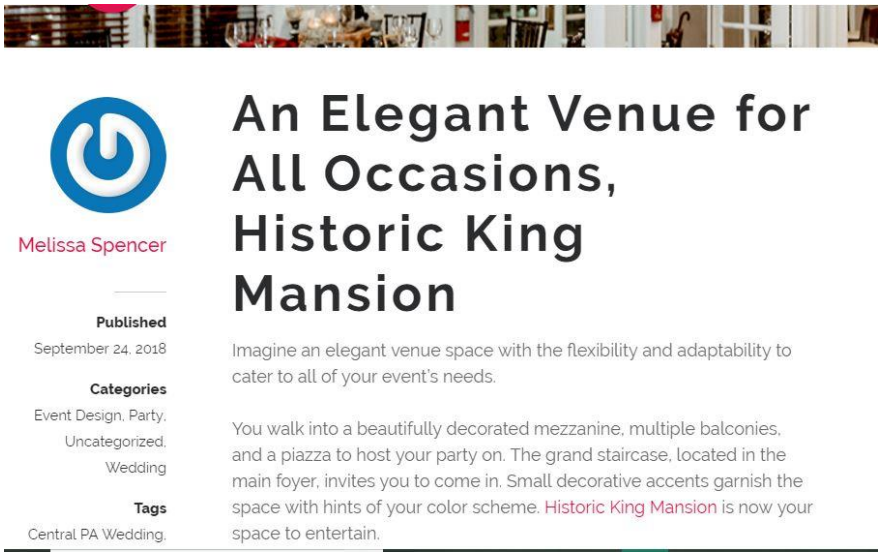


Figure Q (Spencer)

For this blog post, and for the four others I wrote using The JDK Group's style and tone, I had to write descriptive content, pick out and edit all the corresponding pictures, and implement the hours of keyword research I had to conduct to come up with a "just-right" keyword phrase for a blog dedicated to the Historic King Mansion (the exclusive venue featured in my post.) The keyword phrase I ultimately ended up using for this piece was "elegant venue."

After a few weeks of drafting similar blog posts and completing smaller, administrative tasks, my supervisor asked me if I was willing to switch gears throughout this internship and take on working with The JDK Group's external client, Allenberry Resort. This would mean I would be weaned off The JDK Group's blog and onto Allenberry Resort's blog, as well as onto their social media outlets and their special events marketing. Without hesitation, I happily accepted the challenge.

The best way to describe Allenberry Resort is to think of it as a worthwhile weekend getaway, or a destination resort, located in Boiling Springs, Pa. From its original founding in 1786 by the Crockett family, "Allenberry has a long history of delighting guests with live entertainment and warm hospitality" ("About the Allenberry Resort"). Although Allenberry Resort changed hands from the Crockett family to the Heinze family and now to the Kennedy family, its distinctive, relaxing, historical charm continues.

Allenberry Resort is a destination getaway nestled on the Yellow Breeches Creek that includes cottages, houses, or traditional lodges to stay in, an on-site restaurant, an on-site bakery and café, an on-site spa, an original terrace, and an on-site playhouse. Additionally, Allenberry Resort hosts a variety of events including corporate and private events, plays, premier fly-fishing trips, weddings, themed- holiday events, and various outdoor activities. To put it simply, Allenberry Resort "will make you feel right at home, but worlds away" ("About the Allenberry Resort"). To visualize just what this worthwhile weekend getaway could look like, Figure R is a picture of the entrance of the Resort that I took on one of my trips to the property throughout the fall.

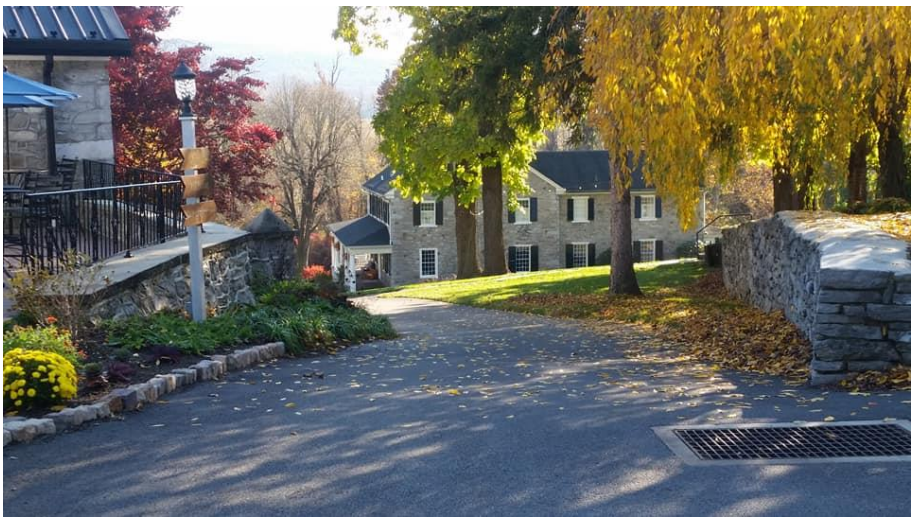


Figure R

Naturally, when I agreed to make the switch to working exclusively with Allenberry Resort, I had no idea what to expect. I started writing blogs for The JDK Group's website, so I figured that my tasks would fall into a similar, blog-style manner. After all, the marketing needs of the Resort mirror the marketing needs of The JDK Group. So, I started my journey with Allenberry Resort by writing one, singular blog post. And then, my responsibilities started to slowly branch and grow from there.

Two Internships, One Intern

This one blog post, "Four Hidden Benefits of Eating Açai Bowls for Breakfast," was challenging to write and research. Since I was neither an expert on the Brazilian superfruit açai nor on Allenberry Resort's style and brand, it took me a significant number of extra hours to draft, edit, and eventually publish this blog post. At the time, my supervisor asked me to compose this blog post to advertise the fact that The Breeches Bakery and Café, the on-site café at the Resort, added açai bowls their menu. My original post is pictured and linked in Figure S, "Four Hidden Benefits of Eating Açai Bowls for Breakfast."

Figure S (Spencer)

Naturally, after the publication of this blog post, my supervisor quickly realized the rapid pace in which I picked up the Resort's writing style and brand. Rather than continuing to assign me blog posts to complete, my supervisor introduced me to the Resort's social media platforms, where I would be attacking the next phase of my internship experience: commercial social media posts.

Outside of my own social media accounts and my familiarity with the social media platforms, I truly did not have any experience with a commercial social media account. Sure, I have posted on my own account occasionally, when big life events happened, or I found a cute puppy video to share, but I never maintained a consistent posting schedule for my accounts. I only posted when I deemed necessary, which was a rare occasion. So, creating dozens of Facebook and Instagram posts, and then scheduling them, was a massive accomplishment and commitment for me to successfully adhere to.

But it's only social media, right? How hard can it be? Believe me, I thought the same exact thing going into this process. All social media posts contain no more than three sentences of content, with a picture and a couple of links, if that. I thought it would be a breeze! However, it was these social media posts that took up most of my time.

For Allenberry Resort specifically, The JDK Group was contractually obligated to maintain the Resort's social media accounts, posting six contractual posts per month about various aspects of the Resort, on top of any social media required to promote the Resort's events. My first trial with the Resort's social media accounts consisted mostly of the contractually obligated posts The JDK Group had to produce monthly for the Resort.

Naturally, I quickly adapted to writing the content for these posts. After learning about the Resort's lodging options, history, and amenities, it was easy for me to draft posts advertising

the Resort's historic buildings and their lodges/houses/cottages. Picking out the pictures to publish alongside my content, however, became my main obstacle in this social media journey. I would spend hours upon hours looking for that perfect picture, that one single snapshot that I envisioned would work well with my post. It was a harsh reality that I would say roughly 70 percent of the time, I could never locate that "perfect" picture, and I would have to settle for a different picture instead.

In addition to the contractual social media posts, my supervisor also tasked me with creating social media posts for the events happening throughout the fall at Allenberry Resort. These events included a wide range of fall-themed family events, Halloween events, Thanksgiving events, and all the outdoor activities and weddings in between. The process for creating these social media posts mirrored the contractual posts: content, images, and links. The only differences between the events and the contractual posts lay within the picture-picking process. Since my supervisor either created or had already picked out the images that paired with the event content, the event posts were a much faster process than the contractual posts, which I was extremely thankful for.

To show examples of each of these posts, the post listed in Figure T is a contractual post I drafted and published for the month of October on the natural surroundings of the Resort. The post reads, “Leaves are falling, autumn is calling. Celebrate the change in season by strolling in the scenic autumn atmosphere along the trails at Allenberry Resort and among the surrounding Appalachian trial. See for yourself by staying with us! #autumn #leaves #appalachiantrail”

Figure T (Allenberry Resort)

This next post I have shown in Figure U is an event post I drafted and published for the Boo Bash at Allenberry Resort (a Halloween-themed weekend). This post says, “Gather around the campfire and embrace your family this Halloween. Enjoy live music while sipping on a glass of wine, making s’mores, and creating memories with your significant other with the included

Campfire Cozy Package at Boo Bash at Allenberry Resort, now at a new, lower price! Learn more: #halloween2018 #halloweenweekend #halloweenevents #kidfriendly”

Figure U (Allenberry Resort)

However, it was inevitable that SEO, keywords, and hashtags played a role in creating the content for these social media posts. As, it was my goal—my sole job and purpose—to drive attention and traffic to the events the Resort was promoting. These events are a large portion of the Resort’s revenue and branding, so the popularity and relevancy of my social media posts and my blog articles were crucial to the development and success of the Resort’s marketing strategy.

Although it may not seem like it from the content displayed in these posts, SEO, keywords, and hashtags were the three main driving forces that dictated my content. With each set of social posts, I spent hours researching and learning the current trends of the industry. What are the current trends? What are the current buzz words? What types of posts are most liked on Facebook, Instagram, Twitter, etc.? What are the popular hashtags? Which trends are relevant to the topics I am posting about?

It’s no coincidence that SEO and keyword analysis were with my social posts, and my

blog posts, every step of the way. From the popular keywords and buzzwords to the trending hashtags and compelling content, my posts about the Boo Bash and the Still House and the Thanksgiving Weekend and the 24 Days of Christmas all revolved one familiar concept: search engine optimization. Without the hashtags, my posts would have never been noticed. Without the keywords, my posts would have never been searched for. Without popular SEO techniques, my blog posts and social media posts would have resided deep in followers' newsfeeds and even deeper in Google search query results.

Yet, role as the Social Media, Public Relations, and Content Writing intern/ Communications intern at Allenberry Resort did not stop at social media posts nor at producing blog content. Rather, I was introduced to a challenge and task: producing the landing pages for the upcoming events at the Resort.

One Step Further

For reference, a landing page is the main, "go-to," page for a website or event that receives a heavy amount of the page's traffic and leads. A landing page is typically the page that you would "land on" if you clicked on a link let's say in a Google search result or a Facebook ad. On this page, you could find a balanced mixture of content, images, links, and other relevant resources.

Specifically, for my task and for Allenberry Resort's events, I was tasked with creating landing pages that contained the following:

- Descriptive content
- Relevant keywords
- Captivating images/video
- Appropriate and relevant links to outbound pages

Naturally, this was not an easy task. Sure, the concepts and revenue goals of these events were simple to understand. It was the marketing aspect and the descriptive language that was uncharted territory for me. However, without hesitation, I put my best foot forward and began applying my SEO experience and knowledge to this new aspect of my internship experience.

Every landing page I created for the various events happening at Allenberry Resort undoubtedly began with a standard marketing template scattered with ideas. Within these templates would be the specifics of the event (like date, time, and price) as well as a short description of the event and its unique selling points that I should focus on marketing to interested individuals. From this information, I could gather the gist of the event and the angle I needed to take to ensure successful marketing practices were in place. In other words, I was simply tasked with putting the pieces of the Resort's marketing puzzle together to drive sales and expand the reputation of Allenberry Resort.

After gathering all the required information and relevant images/links to promote and describe the event, the descriptive content came naturally to me. My writing classes and natural writing aptitude guided me through writing in a descriptive, but informational, tone, describing both the specifics and the enticing features for the event at hand. Of course, the events varied. One day I would be creating the landing page and subsequent content for Allenberry Resort's 24 Days of Christmas campaign, and the next I would be creating a landing page for holiday baked good sales or an inaugural tree-lighting ceremony that served as its own, separate event. Nonetheless, the process and time it took to create each landing page remained consistently the same throughout the events.

To show an example of a landing page I created, the screenshot included in Figure V is a web page I recently created for the upcoming Oxymorons Improv Comedy Troupe performance at the Playhouse at Allenberry Resort. For this landing page specifically, I was responsible for creating the heading and the content, as well as including the image of the Playhouse and the embedded teaser video for the Oxymorons.

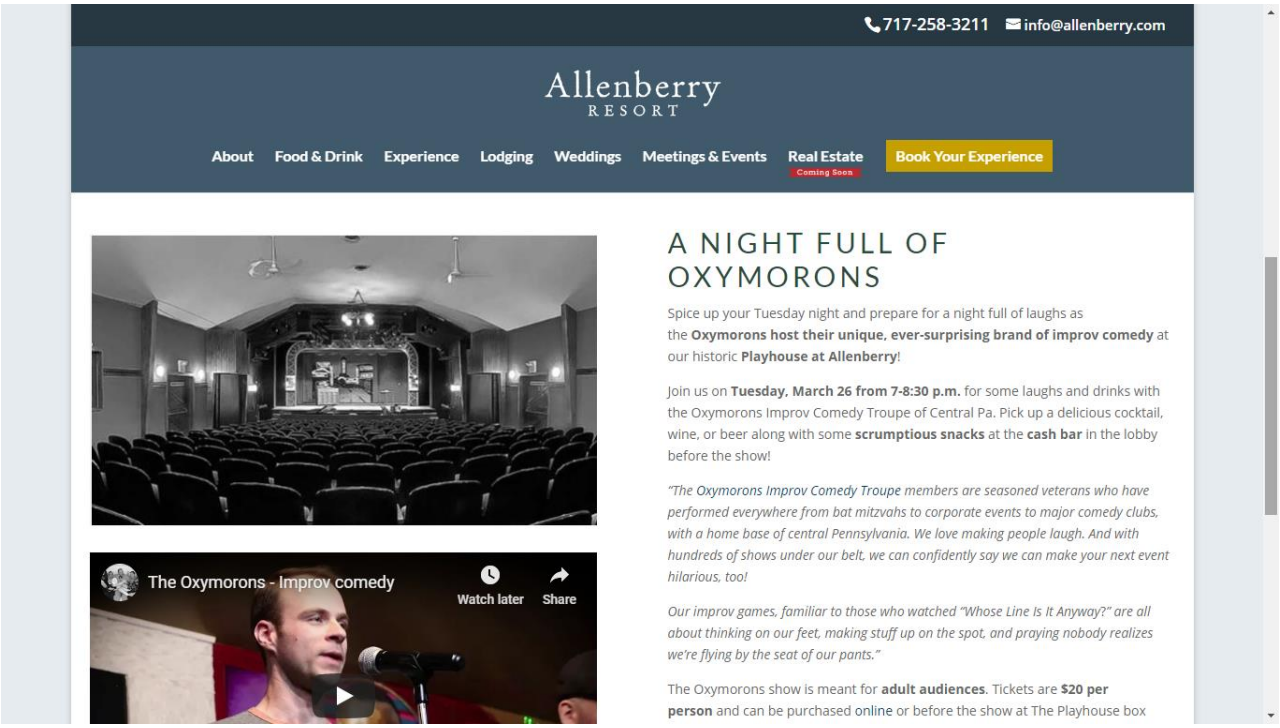


Figure V ("A Night Full of Laughs with the Oxymorons Improv Comedy Troupe")

Once again, SEO and keywords played a major role in the creation of the content for these landing pages. Using the Yoast SEO analysis tool built into WordPress, I would research and try different keywords until I found the perfect fit for my landing page. Naturally, the keywords I needed to choose for these pages had to be "just right," not too vague but not too specific. Therefore, I spent a large amount of time trying to apply my knowledge of SEO and keywords to create a popular and relevant landing page for those interested in attending the event or those looking to learn more information about the event. Of course, my "just right" keywords were also meant to generate traffic and leads onto the landing pages to increase interest in the

events at the Resort. For the Oxymorons Improv Comedy Troupe page specifically, I used the keywords “improv comedy troupe.”

A Spring Full of Changes

When I departed for Winter Break in December, I spent five weeks away from my internship at The JDK Group, as they said it would just be easier for me to start back up in January. Of course, I figured I would be responsible for the same types of tasks that I was assigned in the fall. However, I was not prepared or ready for the magnitude of the tasks my spring internship at The JDK Group/Allenberry Resort would present me with.

On my first day back in January, my supervisor pulled me into a conference room to catch me up with what happened while I was away and to go through my new responsibilities throughout the spring. Although some of my responsibilities from the fall would carry over into the spring, many changes were happening at Allenberry Resort that would dictate the course of my assignments and tasks throughout the semester.

As I expected, my social media, landing page, and blog responsibilities remained the same. I would be responsible for creating the social media posts, landing pages, and subsequent blog posts for the seasonal events Allenberry Resort had planned. However, what I didn’t expect, was the fact that I would be flying solo in my venture of marketing these events. In other words, my supervisor was turning over the entirety of the special events marketing to me.

Naturally, I felt confident and ready to take on this challenge. I had already accomplished most of my “new” requirements through my fall semester. It was the fact that I would be alone in this venture that made me nervous. My supervisor was generally extremely quick and kind to answer all my questions, but now I would be on my own. Of course, he knew what events were planned and the tasks that he assigned me, but the weight of catering to the Resort’s marketing

agenda was lifted off his shoulders and pushed directly onto mine. Could I handle these tasks?

Fortunately, my spring internship experience has been just as positive as my fall internship experience. Some of the tasks required of me are listed, but not limited to, the ones below:

- Creating a landing page for the event
- Creating social media posts for the event
- Submitting the event to community calendars
- Adding the event to the appropriate places on Allenberry Resort's website
- Creating e-blasts (scheduled emails) about the event

Although some of my tasks can seem daunting or tedious at times, I take pride in knowing that I accepted a challenge and successfully mastered it. From St. Patrick's Day events, comedy show events, and Valentine's Day events to the upcoming Easter events, film-screening events, and Mother's Day events, I know my efforts are crucial to the successes of these events and marketing campaigns.

However, my successes (and even my failures) could not be measured without my knowledge of keywords, hashtags, and SEO. The events' successes depend upon it. My career depends upon it. A Social Media, Public Relations, and Content Writing intern depends upon it, every single day.

A Quick Summary

Now I know exactly what you are thinking at this point: why does this matter to me, an English (or Communications or Business or etc.) major? After all, it's only words, right? The reality is that the current business and communications industries rely heavily on content writers to push past their words, to create meaningful content that produces sales and leads while also

adhering to optimized keywords and content strategy. Through SEO and heavy data analysis, content writers become creators and data miners. They are responsible for not only creating content, but also implementing it well. Constant keyword research, content optimization, search engine optimization, brand strategy, and data analysis fuel the industry.

Take my internship experience, for example. My job title and job description were not anywhere near representative of the actual work I was contributing to The JDK Group and Allenberry Resort. Sure, I was working, learning, and growing through their social media accounts and their content and public relations needs. However, no matter how hard I tried to avoid it, SEO always crept its way back into my content and my projects, like that lingering cough you just can't seem to get rid of after catching the flu. It is there. It is relevant. And, it is ready to change everything you thought you knew about content writing.

Of course, as the saying goes, you never truly can forget where you came from. From the birth of Brin and Page's initial Page-Rank hierarchy to the crawling stages and eigenvectors that happen in between, the mathematics and analytics behind common SEO concepts and strategies never leave the content writer. The matrices, the probabilities, the calculations, and the algorithmic updates may be challenging concepts, but they are crucial to the content writer's survival in a rapidly-changing industrial world.

So, welcome to 2019. Not much has changed since 2018. The influence of the Google Search Engine grows stronger with each day. Billions of people are still searching for the answers to their queries. New websites, landing pages, and content are being added as fast as we can think of them. The crawlers are still crawling. Google's Page Rank algorithm is constantly expanding, changing, and adapting to the current content climate.

It is without a doubt that the Internet has changed my life, and it is absolute that my internship experience at The JDK Group/Allenberry Resort has too. I can no longer complete a simple Google search for “blue ballet flats” without thinking about the amount of time and effort it took someone to research keywords, create the content, and choose the images for the page I have haphazardly landed upon.

In summary, this thesis works through the history of the Google Search Engine, the process of the Google Analytics software, and the examination of a current entry-level content writing position at a medium-sized special events and catering company. It pairs both the liberal arts and the sciences together; it fills in the missing pieces of the puzzle. It considers both the analytical and creative sides of the current marketing industry, the left-brain and the right-brain of the professional writer.

Thus, the professional writer has evolved into more than just a writer. The professional writer analyzes keywords, digs deeper into their company’s data, follows current marketing trends, maintains their company’s bran, and above all else, writes content. And, inevitably, the professional writer can never be too many steps (or too many algorithms) ahead.

Appendix

A. Screencast One—Blue Ballet Flats

Hey guys! It's Melissa, the author of this paper, and I'm here to show you just how the Google Search Engine works! Now, I know that most of you already "know" how the Google Search Engine works because you use it almost every day, right? If there is anyone watching this video right now that has never completed a Google Search, I would be extremely surprised (but I would love to hear from you!)

Anyways, I'm going to go a little deeper into the context of how the Google Search Engine works, and hopefully this video will help you to visualize some of the concepts you previously read about in the first chapter of my paper on the Google Search Engine. So, let's get started, shall we?

To keep matters simple, I am going to continue to reference the search query for "blue ballet flats" that I have mentioned throughout my piece. This way, you can really begin to depict and start to imagine some of the mathematics that happens behind the scenes of a simple search query. Without further ado, let's pull up the Google Search Engine. [Pull up Google on screen]. Now, this is where all the magic happens.

So, I'm going to start by typing in "blue ballet flats" into the Google search box. [Type "blue ballet flats" into search box]. Let's look at what results we see here. As you can see, the search results are split into two categories, sponsored and unsponsored. The sponsored ads are the ones that are contained in these boxes up here [point to boxes], and the ranked pages appear below. As we can see, the first three pages for the search term "blue ballet flats," are the same as the ones included in my chapter: dsw.com, kohls.com, and Nordstrom.com. And, if we click on any given link, [click on a random page], it will take us directly to a page full of options of blue

ballet flats I could potentially buy. Seems simple enough, right?

Now let's try this with another set of keywords, ones that are less specific. If we navigate back to the Google homepage [navigate back to Google.com], and type in just the search term "ballet flats," will our results be the same? [Type "ballet flats" in Google search bar]. As you can see, the results clearly are not the same. Zappos is ranked highest within this search and DSW, who was ranked first in our last search, is ranked third. If we click on the Zappos listing, the results we receive are not as specific as we would like them to be. In this example, the Google Search Engine provides us only with what we search for, and no more or no less.

So, what if I spell a word wrong? When people type fast or are looking for a quick answer, sometimes they can jumble the letters or mix up a spelling. Well, let's see what happens. If we navigate back to the Google homepage again [navigate back to Google.com], and type in the search term "ballet falts," will our results be the same as our previous ones using the term "ballet flats"? [Type "ballet falts" in Google search bar]. The Google Search Engine, as you can see up here, will try to predict the words you misspelled and then show you those results (it assumed "falts" was supposed to be "flats"), so therefore the results are in fact the same. However, if we click on this option to disregard the spelling assumption, the results are completely different. We have entered the world of "ballet falts" instead of "ballet flats," and I'm honestly not sure if that's exactly where I want to be.

To sum up this little experiment, let's recap what we just experienced using the Google Search Engine and some sample queries. When we searched for "ballet flats," our ranked results were different from when we searched for "blue ballet flats," and the results were extremely drastic when we searched for "ballet falts." That's because Google handles each search query individually, using its PageRank algorithm and over 200 factors to translate our query, retrieve

the information it believes we are looking for, and then rank the information based on its popularity and relevancy to what we are searching for, all within roughly half a second [point to time of results]. How amazing is that?

Be sure to check out my other screencasts and tutorials as you read through my work! Thank you for watching!

B. Screencast Two—Google Analytics Software

Hey guys! It's Melissa, the author of this paper, and today I am here to walk you through the basis of the Google Analytics software I have been mentioning throughout the second chapter of my work. Within this video, I will walk you through some of the awesome features of the free Google Analytics software, as well as some of its customizable options. So, without further ado, let's dive right into Google Analytics.

To log onto your Google Analytics account, you need to navigate to https://analytics.google.com/analytics/web/. [Type https://analytics.google.com/analytics/web/ into the Google search bar]. For the purposes of this screencast, I will be using the Google Merchandise Store demo account that is provided to Analytics Academy students who need an account to practice on throughout the Analytics Academy courses. Let's dig right in, shall we?

Welcome to the Google Analytics dashboard. Currently, we are on the customizable homepage which Google has arranged for us to view metrics like "audience overview," "real-time reporting," "acquisition report," "what pages do your users visit," etc. Of course, if you would like to change the metrics located on your homepage, you can simply visit the customization tab [click on the customization tab], where (as you can see) you can create custom dashboards (or homepages), custom reports, and custom alerts to fit the data you are viewing and the questions you are trying to answer.

Moving onto the rest of the tabs located on the left-hand side of the screen, the five tabs listed underneath the "Customization" tab all deal specifically with report analytics. The "Real-Time" tab [click on Real-Time -> Overview tab] gives a live, up-to-date report of the pageviews and active users on your site, in real-time. Moving on, the "Audience" tab [click on the Audience -> Overview tab] provides customizable metrics on user information like users, new users, and

number of sessions per user. The “Acquisition” tab [click on Acquisition -> Overview tab] showcases a customizable, but more visual, dashboard that showcases how the users made their way to your website among other behavior and conversion statistics. The “Behavior” tab [click on Behavior -> Overview tab] provides us with a familiar looking interface to the “Audience” tab that covers pageviews, the bounce rate of your website, and the percent exit of your website. Lastly, the “Conversion” tab shows us the specifics of customizable ecommerce-based metrics like “Goals,” “Multi-Channel Funnels,” and “Attribution.” If we dig deeper into the “Goals” section of the “Conversions” tab [click on Goals -> Overview tab], we can see customizable metrics like goal completions, goal value, and goal conversion rate.

Now, I know that I have said the word “customizable” quite a bit so far throughout this video, and I figured it would be both beneficial and relevant to discuss what this means in terms of Google Analytics software. “Customizable” in this context means exactly what you would expect it to, the ability to change or manipulate the dashboard as you see fit. We can “customize” almost any aspect of the Google Analytics experience, but for this video, I will focus on just the main dashboard (or homepage) [navigate back to the “Home” dashboard]. If we go to the “Customization” tab [click on the “Customization” -> “Dashboards” tab] and click on “Dashboards” option, we can create a customized dashboard with tailored statistics to the report or research we are trying to complete. So, let’s click on the “Create” tab and then the “Start from Blank Canvas” option listed [click on “Create” -> “Start from Blank Canvas” tab]. From here, we can customize our dashboard.

For the sake of time, I will only add one thing to our customized dashboard, but as you can imagine, the process is the same for adding more metrics to the dashboard or customizing another section of the Google Analytics experience, like “Acquisition” or “Audience.” Once we

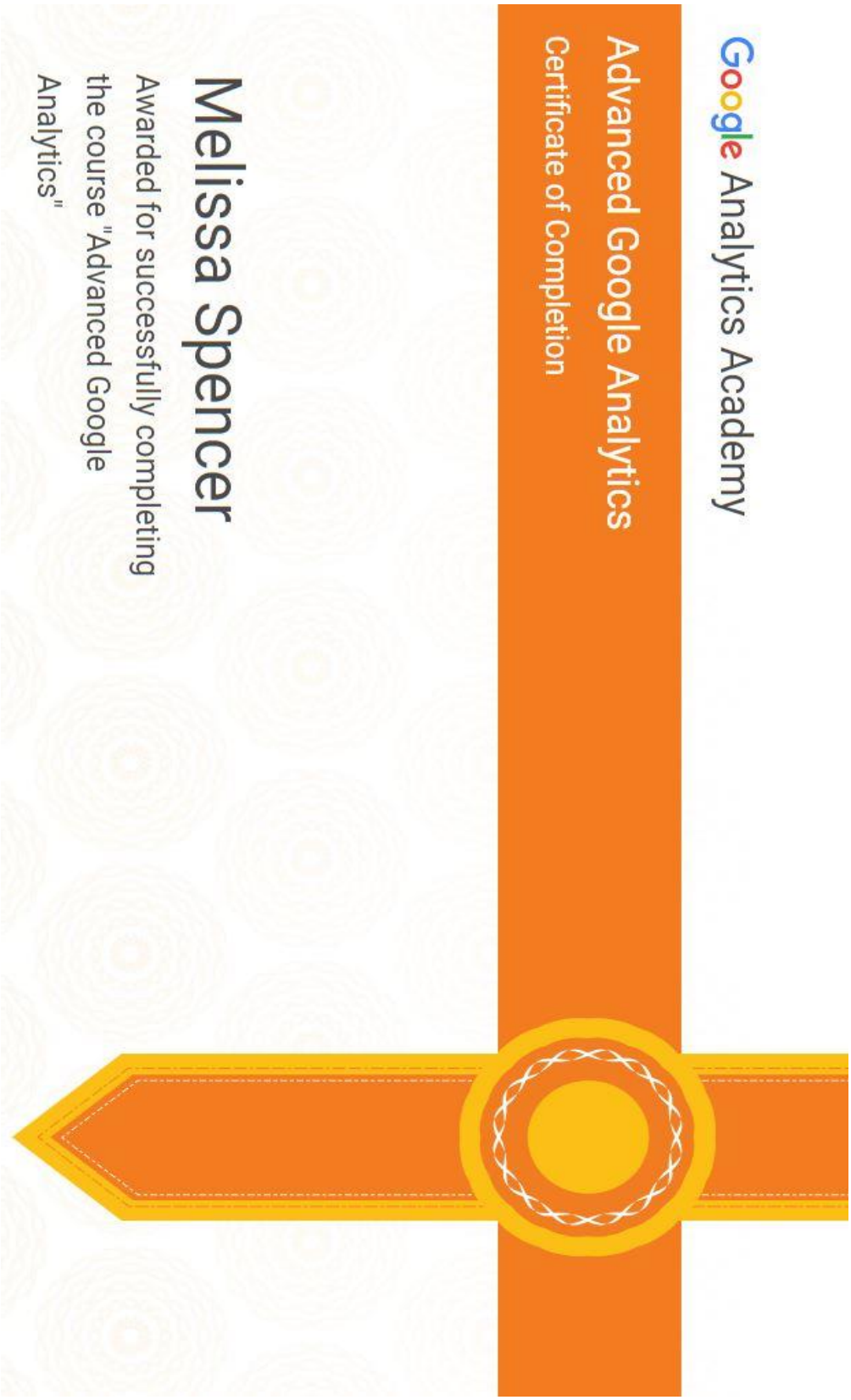
click on the “Start from Blank Canvas” option, a screen like this will pop up. This is where we can choose which metrics we would like to add. So, let’s go ahead and add “Average Session Duration” to our dashboard [click on “Metrics” -> “Add a Metric” -> “Avg. Session Duration”]. It really is just as simple as clicking a button.

As you saw, there was also the option to “Start from an Existing Canvas,” which functions in a similar manner. This option is great for those who may not know the exact metrics they want to display or need to display at any given time.

So, there you have it, a brief overview of the Google Analytics software application. Of course, I couldn’t cover all the software in just a short video, but I hope this helped you to visualize the basics of how Google Analytics works and how you can customize it to your advantage. Thank you for watching!

C. “Google Analytics for Beginners” Certification

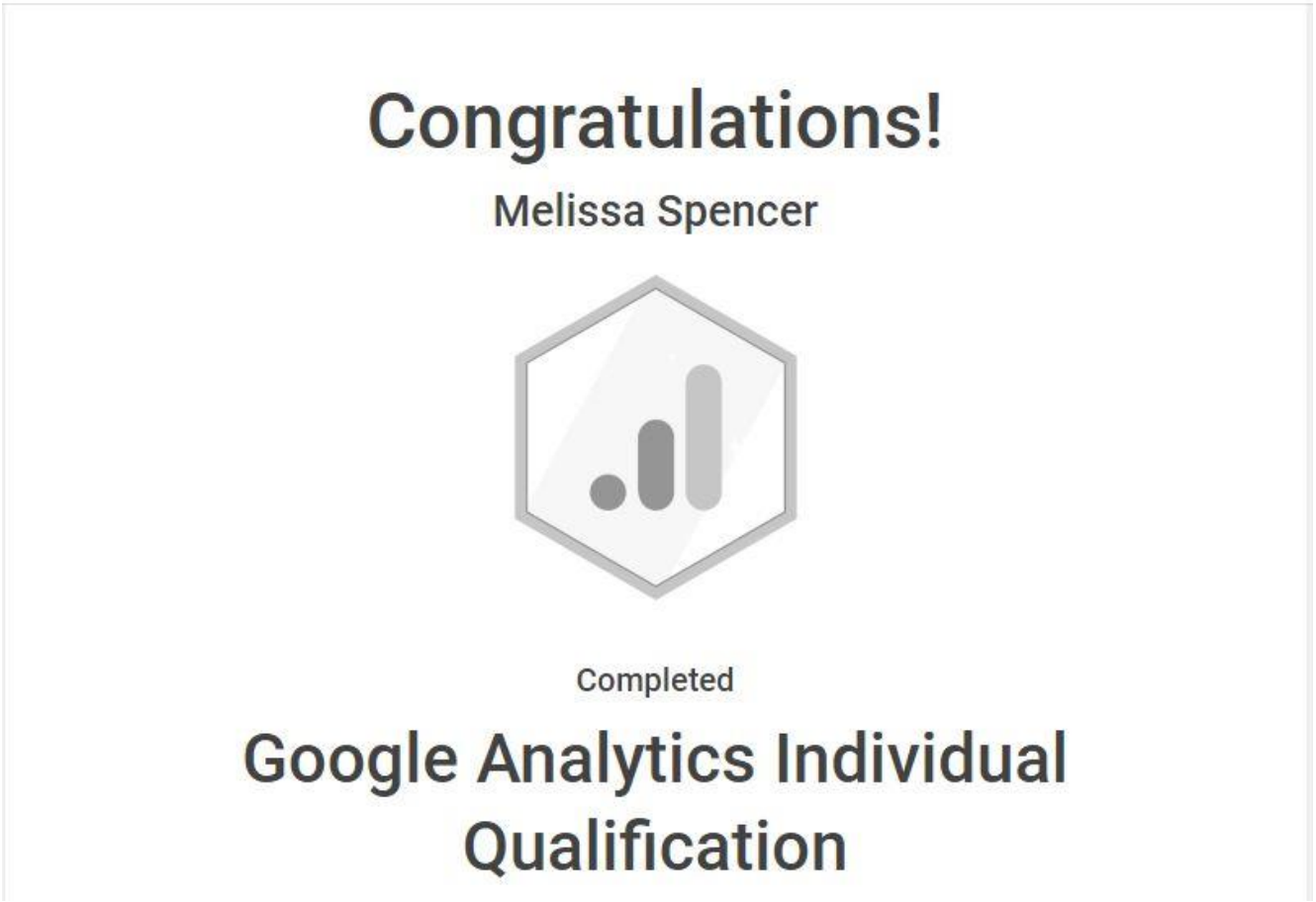
D. “Advanced Google Analytics” Certification



E. “Getting Started with Google Analytics 360” Certification

F. “Ecommerce Analytics: From Data to Decisions” Certification

G. Google Analytics Individual Qualification Completion



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