The Silent Giant of Marketing: How Artificial Intelligence is Revolutionising Digital Marketing

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Digital marketing is transforming all the time due to technological advancements. This qualitative study aims to determine impacts artificial intelligence brings to digital marketing. The researcher’s objective was to understand the opportunities and challenges artificial intelligence brings to marketers across the world.

The theoretical framework for this study was established around understanding the concept of artificial intelligence and the related theory. Machine learning was determined to be one of the core characteristics of artificial intelligence. To completely comprehend the repercussions of artificial intelligence in digital marketing, content marketing, social media marketing, e-mail marketing, and search engine optimisation were also examined.

The methodology of the study presents the thesis writing process as well as the methods used to gather the data. The data was analysed through qualitative research. Secondary data was collected by utilising desktop research. It included written and visual sources such as scientific articles, books, commercial texts, and video content. Primary data was gathered by conducting an interview with an author dealing with artificial intelligence. The key theme of the interview was to establish the effect of artificial intelligence technologies in digital marketing.

The gathered data was qualitatively analysed to make proper recommendations to marketing professionals. The main results indicated how organisations should approach artificial intelligence. Artificial intelligence tools were recommended for social media, search engine optimisation, e-mail marketing as well as content marketing. In addition, companies that are utilising artificial intelligence were mentioned to indicate the rise of technology being incorporated in digital marketing.

To conclude, the study specifies the ups and downs of artificial intelligence and aims to guide marketers to make better marketing decisions.
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1 Introduction

The goal of this chapter is to familiarise the reader with the thesis topic chosen. The reader will be introduced to the background and importance of the topic. Furthermore, the author explains the demarcation process and key concepts. And finally, the author introduces the benefits this thesis will generate to marketing professionals worldwide.

1.1 Background

Many of us when we hear the term artificial intelligence (AI), we think of a hot subject matter that supposedly is affecting our lives. The aforementioned statement is accurate, AI is impacting our lives at a drastic pace. However, the truth is, AI is not a totally new concept. The first time the question whether machines can think was discussed by Turing (1950, 433) in his paper “Computing Machinery and Intelligence”. Finally, the term AI was introduced by John McCarthy in 1956 (Markoff 2009).

Today, more than 60 years after the concept of AI was uncovered, marketers and businesses around the world are beginning to understand AI’s obstacles and benefits as well as why AI operates the way that it does. (Goetz 2018.)

In 2019, AI and digital marketing are starting to have an interconnected relationship. AI’s competence in gathering data, analysing it as well as implementing and gaining knowledge from it is helping to evolve digital marketing strategies. As AI persistently develops, so will its capacities to improve digital marketing. (Martin 2018.)

Even though AI is so crucial in the development of digital marketing, the author had a personal interest in writing her thesis about AI. John McCarthy, also remembered as “the father of AI”, was brought up by Lithuanian and Irish immigrants (Childs 2011). The author herself is Lithuanian which made the author thrilled to learn that such a small nation as Lithuania contributed to the existence of AI to some degree.

1.2 Research Question

The main objective of this thesis is to encourage companies to increase the use of AI in their digital marketing strategies. Moreover, the author will examine what are the ways in which AI is embellishing digital marketing as well as to discuss possible risks and downfalls of AI in digital marketing. The outcome of this thesis will allow marketing specialists to recognise what are the suitable areas to implement AI in digital marketing, what to avoid, and how to make the most use out of AI.
The following are the investigative questions (IQ) of this thesis:

IQ 1. What is the role of AI and machine learning (ML) in marketing?
IQ 2. What are the benefits of AI in digital marketing?
IQ 3. What are the detriments of AI in digital marketing?
IQ 4. What is the future of AI in digital marketing?
IQ 5. What are the recommendations to marketing professionals regarding AI?

Table 1. Overlay matrix

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1.3 Demarcation

Due to marketing being such a broad topic, the author had to narrow down to a specific field of marketing. The reason why the author chose to concentrate on digital marketing and AI was influenced by the amount of journalistic and professional coverage it had received in the media before the thesis writing process. The media coverage on this topic also continued during the thesis writing process.

Furthermore, the author has a professional interest in working in the digital marketing field after her graduation. Through the thesis writing processes the author aims to obtain the most relevant and valuable knowledge about AI’s connection to digital marketing. The above-mentioned reasons have contributed to the author’s decision to choose digital marketing as one of the aspects of focus in her thesis.

The author will primarily concentrate on the topics of artificial intelligence, machine learning, big data, and algorithms. This will be done with the aim to specify radical benefits and drawbacks. Additionally, the author will examine the future of AI in marketing.

1.4 International Aspect

Since this thesis is concentrating on the interconnected relationship between AI and digital marketing, it means that this thesis will have an impact on small consumers in one end of the world to massive corporations at another end of the world.

Additionally, the author will specify practical examples of international corporations that have added value to their digital marketing operations by incorporating AI in their daily operations.

1.5 Benefits

This thesis will deliver benefits to four main bodies: the upcoming graduates, Haaga-Helia University of Applied Sciences, marketing professionals, and lastly, the author of this thesis.

The author anticipates that while preparing for the thesis writing process, students will be able to use this thesis as a template of what standards and academic knowledge are expected from students that are writing thesis on subjects of AI and digital marketing.

Haaga-Helia University of Applied Sciences will gain value of free publicity as the author interviewed field experts to gather necessary information about AI, digital marketing and
technologies. Likewise, the university will obtain publicity at the author’s current and future organisations.

The author also anticipates that this thesis will be used by marketing professionals as a tool to better understand and work with AI in a more user-friendly manner. The author hopes that this thesis will encourage marketers to learn more about technological advancements in digital marketing field.

And finally, the author will obtain personal gains of professional growth through thesis writing and research. The thesis writing process will allow the author to deeper understand a different point of view on AI and digital marketing, and to become as neutral and precise as possible in academic writing. And lastly, the author will gather knowledge about current technological and digital marketing advancements taking place in 2019 which could also be seen as an important element of professional growth.

1.6 Key Concepts

Artificial intelligence (AI) is the ideology as well as the growth of computer systems that are able to undertake jobs typically requiring human brainpower. Examples include the ability of visual recognition, voice recognition, making tough decisions on difficult problems and aptitude to interpret languages. (Oxford University Press 2019.)

Machine learning is the skill of a computer to acquire knowledge from raw data instead of being supplied with instructions by humans. This means that machines are capable of detecting patterns as well as obtaining significant knowledge from the data it extracts from its detectors. (Buller, Gifford & Mills 2018, 74.)

Search engine optimisation (SEO) is the method of filtering one’s website by utilising on-page and off-page processes in order to be listed and classified fruitfully by search engines such as Google, Bing, and many others. To obtain a prosperous and organic listing in a search engine results page (SERP) takes a great deal of hard work. (Dodson 2016, 7-10.)

Content marketing is a strategic marketing method centred on constructing and dispersing valuable, important, and regular content in order to acquire and keep a distinctly targeted audience. The end goal of content marketing is to boost lucrative customer action by resolving their problems through published digital content. (Content Marketing Institute 2019.)
Algorithms can be defined as a collection of principles for executing a task. In artificial intelligence, the algorithm expresses to a machine how to try solving an obstacle(s) or answer a question which could not be resolved before. (Akerkar 2019, 75.)
2 Artificial Intelligence

The aim of this chapter is to introduce the main concepts of AI and to allow the reader to familiarise with the background and development of AI.

One of the greatest blessings of the millennial generation is the data collected during the past couple of decades. Despite professionals being unaware of possibilities that data could have provided to organisations years ago, nowadays data initiates the way companies operate on a day-to-day basis.

A giant part of AI is data, more specifically, “Big Data”. According to Chaffey & Ellis-Chadwick (2019, 248), “Big Data” is a term that represents analytical methods and schemes that exploit a gigantic volume of information that is being collected by companies across the world. A diverse amount of data is gathered when companies online with their consumers or prospective ones online.

According to Sponder & Khan (2018, 2), there are two kinds of data that AI has to work through:

- Structured data consists of information that can be simply organised, for example, invoices, census data, medical data, etc. After the data is gathered, it occupies a specific category. Hence, this type of data can be easily managed in the form of a spreadsheet;
- Unstructured data is more complicated, and it must be managed to create intelligible results. Unlike structured data, unstructured data cannot be processed in the form of a spreadsheet.

Chaffey & Ellis-Chadwick (2019, 248) discuss that there are two immense advantages that Big Data provides for marketing:

- Finding relevant tendencies and patterns by examining huge amounts of data that tend to be confusing, which help to advise on upcoming marketing campaigns or strategies;
- Finding success aspects to create more relevant consumer interactions by developing communications, whether it would be through scheduling messages or targeted discounts.

On the other hand, Big Data also imposes some challenges and additional prospects. These challenges and opportunities can be explained by defining different Big Data dimensions:

Volume: companies gather information from numerous sources, whether it would be through social media channels, such as Instagram and Facebook or through simple interactions with businesses online. It used to be a giant issue to maintain such knowledge.
Nowadays, organisations can solve this matter by using appropriate software. (SAS Institute Inc 2019.)

**Velocity:** according to Chaffey & Ellis-Chadwick (2019, 248), velocity demonstrates how marketing professionals have means of entry to real-time facts and insights. This allows professionals to receive crucial analytics of interplays via websites, apps as well as Twitter, Facebook, LinkedIn, and other social media channels. Therefore, velocity proves to be an enormous opportunity for organisations.

**Variety:** Chaffey & Ellis-Chadwick (2019, 249) and SAS Institute Inc (2019) discuss that there are several kinds of data compositions – from structured to unstructured data, from visual data to business contracts. The list is broad. To conclude, this indicates the benefit of combining diverse data to acquire buyer insights.

**Variability:** SAS Institute Inc (2019) claims that ‘Big Data’ also dimension variability which means that professionals have a massive issue of managing data due to its enormous load, especially, as unstructured data is hard to handle.

**Complexity:** SAS Institute Inc (2019) furthermore states that ‘Big Data’ is complicated due to it being challenging to connect, pair, refine as well as convert throughout the systems. Nevertheless, it is essential to link and combine connections, groupings as well as other data ties, because if that is not done, the data could be unworkable.

According to John McCarthy (1998, 2), AI is the art, method and engineering skill of creating intellectual software, computers, and other machines. McCarthy explains “intelligence” as a computation element that has the capacity of accomplishing the world’s objectives. Furthermore, McCarthy notes that “intelligence” has been linked to human intellect since people are the most skilled and knowledgeable creatures in the world. However, McCarthy (1998, 3) states that even though “intelligence” is based on human intellect, programmers are not particularly stern on placing the human mind into a computer or software, since people’s minds have many idiosyncrasies. People tend to act irrationally. Some of us are irresolute and unpredictable. Consequently, programming all human mind into a machine could work not in our favour. Nevertheless, the overall goal of AI is to overcome issues and reach targets just like humans would face them in everyday situations (McCarthy 1998, 4).

In consideration of AI being a challenging concept to understand, Jim Sterne (2017, 5) states that there are the “three Ds” of what AI is able to accomplish.
Detect: AI has the ability to determine which features or characteristics in a subject matter are the most foreseeable. Despite large amounts of information and a huge mixture of data kinds, AI is able to recognise the most predominant characteristics. It can assess which ones to favour and which ones to disregard. (Sterne 2017, 5.)

Decide: AI is also able to take data and measure the most predictive characteristics alongside one another to form a decision. It manages to take a vast number of characteristics into deliberation, evaluate the importance of each respectively, and attain conclusions. (Sterne 2017, 5.)

Develop: every repetition allows AI to establish and blossom. There is no difference if it is taking into account the new data or the analysis of some research. AI manages to modify its views about the environment, along with how it assesses each factor. Consequently, AI has a power of programming itself. (Sterne 2017, 5.)

2.1 Levels of AI

Kaplan & Haenlein (2019, 16) state that AI has a couple of different levels. However, the most commonly talked about are artificial narrow intelligence (ANI), also known as weak intelligence, and general artificial intelligence (AGI), also called strong AI. ANI is only applied to a well-defined area such as selecting the correct e-mail caption or separating a cluster of consumers into target groups for marketing purposes (Sterne 2017, 70).

ANI has been around for a substantial amount of time. Examples of ANI are everywhere, like Spotify knowing what new artists to suggest to a listener based on previous music choices, or Zalando recommending a piece of clothing to purchase based on one’s previous orders.

The key difference between ANI and AGI is that ANI is only able to equal or slightly outshine humans in a precise field. On the other hand, AGI is so powerful that it manages to surpass human intelligence in many different fields. AGI has the ability to speculate, plot and resolve issues separately. (Kaplan & Haenlein 2019, 16.)

Kaplan & Haenlein (2019, 16) claim that third level of AI, also known as artificial superintelligence (ASI), will have superior intelligence which would exceed humans in every single field. Presently, ASI does not exist. However, not a single person can recognise what the consequences would be if such a level of AI emerged. Potentially, ASI
could find a cure for HIV. Still, on the other, hand it could hypothetically abolish us from this universe.

### 2.2 Machine Learning

Machine learning as Sterne (2017, 10) describes is constructed to learn, as its name suggests, instead of following harsh guidelines. What ML is capable to attain is to advance with new encounters and experiences. ML is one of AI’s applications, a wider idea of machines being taught to execute tasks that are presently handled by individuals. (Whiteside 2018.)

Sterne (2017, 12-13) explains that ML searches for patterns and aims to understand them. Comprehending one pattern or trend helps ML to apply its learnings in solving other occurring organisational problems. Furthermore, Sterne adds that the beauty of ML is that it is constructing systems that construct themselves. Instead of learning from data, machines are keen on changing their views about the information they obtain. Machines change the way they understand distinctive experiences. In conclusion, machines – they study.

From the author’s understanding ML can be explained in a very simplified manner. For example, here is a machine which asks a couple of simple questions and becomes smarter:
As one can see from the example above, by continuously asking questions, ML will eventually manage to predict every drink that person has on one's mind. However, for this to transpire ML must learn about the texture of drinks, their sweetness, and other factors. Alpaydin (2016, 41) claims that ML is qualified to achieve the above due to factors of life effortlessly altering most of the time. In fact, various occurrences, possessions, and individuals are not transmitted from one point to another, however, all the mentioned matters must travel through a series of transitional situations. Consequently, as time
passes and ML examines various environments, ML becomes skilled to predict in a fast and precise manner.

The reason why ML is extremely vital for AI is that an automated system that is present in the fluctuating and unpredictable world must have the power to learn (Alpaydin 2016, 17). Would anyone consider AI justly intelligent without a capacity to learn and discover the world equally as humans do?

Alpaydin (2016, 18-19) says that animals and humans alike are data scientists. Every one of us gathers data from our sensors, which we later refine to receive intellectual instructions to comprehend our climate and manage our behaviours to obtain lowest/greatest satisfaction in life. The intention behind scientists being fascinated by our neurological systems is largely due to brains assisting in the development of superior computer systems. Scientists know that if they manage to learn the way a brain completes its intentions, such as speech recognition, then they can outline explanations to human intentions in the shape of algorithms which can be applied in machines.

According to Sterne (2017, 8-9), these algorithms are of massive advantage to organisations. The author states that well trained ML algorithm is able to execute tasks just as well as individuals, which leads to believe that ML technologies are cheaper and more reliable assets to marketing department than some of marketing employees.

2.3 Supervised and Unsupervised Learning

Machine learning has two main types of learning to solve problems or reach goals: supervised and unsupervised.

Akerkar (2019, 79) explains supervised learning as a kind of ML in which “output datasets” teach the computer systems to produce the anticipated and wanted “algorithms”. An example of supervised learning could be a doctor supervising a medicine student. This type of ML is more commonly used than unsupervised ML.

Chinnamgari (2019, Supervised Learning) explains how supervised learning algorithm can aid the bank to decide whether to provide an individual with the desired loan. This example has a vivid issue, there are only two outcomes to it, either a person qualifies or he/she will not. The person would either be able to reimburse the loan or not.

ML must observe the patterns of data from customers that have repaid the loans as well as default payers. This information can be gathered by considering old customer data and
labelling it. Now the supervised learning algorithm will be able to study the patterns found in both types of financial customers to provide a bank with a favourable solution to its problem. (Chinnamgari 2019, Supervised Learning.)

In another example, Sterne (2017, 39) states that for supervised learning to work accordingly, the training data (labelled data) must mirror the features of the underlying task, so a model (algorithm) that performs accurately on the labelled data can be said to have learnt from the issue that has occurred.

On the other hand, according to Goodfellow, Bengio & Courville (2016, 102), unsupervised learning algorithm has to work through a dataset that contains a great number of elements and obtain valuable knowledge of the make-up of that dataset. Therefore, unsupervised learning tries to comprehend data without any direction from labelled data. According to Katsov (2018, 42), unsupervised data is about clustering. In other words, it is a method of categorising data. The author continued explaining that this method is commonly used in marketing for information breakdown and analysis, especially in regard to customer profile related questions.

However, Goodfellow & al. (2016, 102-103) admits that there is a lack of vivid distinction between supervised and unsupervised learning. That is caused by the shortage of testing, which is making it problematic to see well-defined dissimilarities between supervised and unsupervised learning. Therefore, countless ML technologies can be in use to execute supervised and unsupervised responsibilities.

2.4 Reinforcement Learning

An additional type of ML that exists is reinforcement learning. According to Akerkar (2019, 79), this kind of learning is present where “the system interacts” with an interchanging and vigorous climate and is provided with assessments/views, optimistic and pessimistic, to react in response to this climate. Akerkar continuous by saying that there is no predetermined assumption of the right response to an incentive; however, there are approaches that could bring finer or poorer results. To get such results, one must indicate them mathematically.

The fact that reinforcement learning considers both positive and negative views indicates that it is performing a significant role in content personalisation or any other kind of digital personalisation.
2.5 Deep Learning

Deep learning (DL) is a set of ML techniques that take advantage of several layers of nonlinear data handling for supervised and unsupervised element withdrawal and conversion as well as for pattern exploration and categorisation. (Akerkar 2019, 33.)

Akerkar (2019, 33) continues by explaining that DL is required for AI applications such as speech and visual recognition due to “shallow artificial neural networks” being incompetent of managing the gigantic quantity of perplexing information. According to Goodfellow & al. (2016, 13), DL is also known as “artificial neural networks” (ANN). The reason behind this is due to DL being constructed on the basis of all animals. Consequently, DL provides us with human inspired multi-layered data handling Akerkar (2019, 33). The justification for DL being human inspired rather than simply based on our brains, according to Goodfellow & al. (2016, 15) is due to scientists not having the sufficient volume of data to use it as a regulatory tool for DL.

Nevertheless, like humans, DL pursues allocated approach to handling information. DL processes information with consideration of multiple factors/layers such as the nature of data, timing, place, and so on (Akerkar 2019, 33). However, Goodfellow & al. (2016, 16) state that modern DL is more influenced by other factors such as axioms of mathematics or information theories instead basing it more on neuroscience.

2.6 Digital Marketing

Digital marketing is not a new concept. Regardless, it is the area of huge interest to marketing professionals due to opportunities and challenges it provides from small to big size businesses.

The core objective of digital marketing as described by Chaffey & Ellis-Chadwick (2019, 9) is to accomplish marketing objectives through the application of digital communications, data collection, and the rest of technology. The authors continue stating that the results supplied by technology are intended to establish the level of resources devoted to digital marketing. Chaffey & Ellis-Chadwick are aiming to explain is that choosing to adopt the newest technology does not automatically mean that it is in the best interest of digital marketing.

2.6.1 Content Marketing

Every marketer knows that content marketing is a powerful tool. However, for it to be successful, a company must provide its customers/prospects with content of great interest
and value. Before explaining the benefits and pitfalls that AI may provide content marketing, it is essential to understand what content marketing is.

Chaffey & Ellis-Chadwick (2019, 36) explain content marketing as the management of written media as well as video and audio content which is produced to interact with customers and to obtain business goals through published content. Content marketing is a great obstacle and opportunity for companies, because of the increasing number of channels and content being produced. Now the question is, how can AI help/hurt content marketing?

To succeed in content marketing, marketing professionals must be original and innovative with content they produce as more than half of content receivers ignore unrelated and impersonal communications. Despite the IBM study has shown that just over 70 percent of organisations deliver wide-ranging and neutral content to its consumers (Synovec 2019). That is where data comes to the rescue. Data helps to create content that is personalised and more appreciated (Smilansky 2018, 66). As previously mentioned ANI uses data to recommended goods and services to buy based on previous purchases. Nowadays, gathered data may also suggest recommendations for content creation (Sterne 2017, 219). Examples of such may include personalised colours, images, emojis, fonts, etc. Every person has their own preferences. Based on such information, marketers can create e-mails, Facebook sponsored posts that are entirely structured to the liking of every individual. Consequently, AI-powered content curation allows marketers to achieve their marketing goals through smart content curation. (Chaffey & Ellis-Chadwick 2019, 250.)

Content creation with the help of AI is more valuable than it may sound. Producing content of purpose for numerous products and services necessitates a lot of time and resources from any company’s marketing budget. Alibaba is of the companies that have come up with an AI tool that is able to generate multiple thousands of lines of content in a flash of a moment. Hence, this permits retailers to create content without requiring human assistance. (WARC Best Practice 2019.)

Furthermore, AI does not stop there. The natural-language generating (NLG) programs are proficient enough to choose components from a dataset and form a “human sounding” voice for article creation. One AI program that is doing exactly such thing is ‘WordSmith’ which has been in use by numerous organisations in different sectors i.e. Associated Press (Chaffey & Ellis-Chadwick 2019, 249). Similarly, any marketing department, no matter the industry, can take advantage of this innovation for blog content creation.
Fashion and other retailers can take inspiration from basket analysis for content creation. Usually, fashion retailers such as Zalando or Bootz.com would use basket analysis to make purchasing suggestions (Chaffey & Ellis-Chadwick 2019, 184). However, any brand can take advantage of basket analysis for content creation, whether it would be a tech company or a supermarket chain. For example, if a person enters Foodie.fi, and scrolls through the list of products and adds Italian sausages, spinach, and tomato sauce to their basket. Then that person decides to leave those products in the basket without ever purchasing them. The information left in the basket allows marketers to either suggest a recipe or create a personalised e-mail with cooking advice.

Image recognition may also assist in manufacturing marketing content. This is because image recognition is supporting marketers in comprehending visual content that consumers are sharing online. The analysed visual content can provide insights into real consumer behaviour. Many of those insights can be collected through consumer content that was either published on social media or other digital channels. In order to receive real consumer behaviour, imagery must include the purchased product as well as the user of the product (Kietzmann, Paschen & Teen 2018). Factors such as facial expressions and body language may suggest what consumer enjoyed about the product or did not. This type of data may recommend marketers the new ways to approach consumers, product improvements, but also ideas for content creation.

Retailers, such as Cloverleaf, are taking advantage of image recognition. The company is utilising this AI application by analysing buyers’ sentiments while they are in their stores. The way this company is accomplishing it is by having LCD strips around their store, which have the abilities to perceive reactions and other consumer data i.e. age or demographic group (O’Shea 2017). This new type of data analysis, no matter the company, can provide invaluable material for content creation.

The following are AI powered content marketing tools:
- Atomic Reach (2019) helps to analyse text by using ML and ANN techniques;

### 2.6.2 Search Engine Optimisation

Ryan (2017, 63) claims that search engines are the “holy grail” to all marketers that are responsible for online related tasks. On the other hand, in 2019, one could say that text data/analytics is the holy grail of every marketer. Text data can feed us with important consumer insights, and text analytics can form into “statistical measures” to construct
“predictive methods” (Sponder & Khan 2018, 225). Even though it may seem that text analysis is not linked to the SEO - that is simply not the case. Nowadays, with the help of text analytics marketers can deeper understand customer sentiments (Sponder & Khan 2018, 226). This type of information is priceless. The chance of marketers being aware of sort of terms make consumers share content offers an opportunity to be listed higher on every search engine. After all, for this to be possible, marketers must have access to computerised opinion mining. This requires ML technology, text miner, to receive sentiment analysis (Sponder & Khan 2018, 227).

TheySay (2019) is one of the companies that provide such an AI tool. This tool uncovers the type of emotions, sentiments, and topics consumers feel/think of about the published content or material that is considered to be published. Below is an example of how the tool operates. The tool analysed The New York Times article “Which Tech Company Is Uber Most Like? Its Answer May Surprise You” written by Isaac (2019):

![Figure 2. TheySay (2019) testing emotions.](image)

Despite the article intending to surprise the readers, the analysis shows that most of the readers will predominantly feel calmness while reading the article.
The AI application may also provide information about which words, sentences, or statements rise emotions, whether they would be positive, negative, or impartial. The gathered analysis allows the content creator to identify the tone of voice and terminology to use to convey the emotion intended to deliver.

As previously stated, SEO has a lot in common with content since they are having intersected relationship. Therefore, Sterne (2017, 150-151) explains that it is essential for marketers to harvest online material that is legitimate. In a situation where Google, Yahoo! or other search engines think that content is misleading or “fake-news” like this may cause a website to be either kicked off SERP or be listed on a page that a person searching for content would never open. Nevertheless, there are AI tools such as Safecont that can assist in dealing with these issues. Safecont (2019) is a learning algorithm that examines a site and appoints an appropriate grade on every page on the grounds of the risk that it produces. Safecont allows a marketing department to know how much of the material on the website is recurring, if their pages portray an excessive amount of content or if there is not enough of it.

There is no secret, but many of us are more often get captivated by imagery rather than text. Consequently, visual content likewise plays an immense role in user experience as well as SEO. Often, employees that are responsible for SEO efficiency ignore advantages that imagery search may provide. However, to attain a high SERP listing for images, it is fundamental to put effort into captioning visual content. (Volpini 2019.)
Volpini (2019) states that with the help of ML captioning images is not as tough to achieve as one might think. He continues by saying that with a little bit of help from “traditional programming” and putting a bit more care to data that is being used for “training the model” high SERP listing is possible to conquer for any marketer without reliance on a third party AI providers. Therefore, with a little bit of effort from a young or old marketer that has a little bit of passion in his/her profession, and a little bit of learning, high SERP listing is achievable. After all, small and giant companies should have the data that they need to succeed.

Nevertheless, a professional must remember that SEO is like a person may be a tough cookie to crack. It takes a lot of time and patience to achieve the results desired even with the help of AI applications and key performance indicators (KPI) that help to measure one’s success or failure (Ryan 2017, 84).

The following is a suggested AI powered SEO tool:

- Market Brew (2019) aids in predicting SERP listings and provides reasons why company performs the way that it does on the search engine.

### 2.6.3 Social Media Marketing

Social media as described by Ryan (2017, 121) is web-based software used by many to interact online. Those interactions are usually performed through text, audio, and visual means; however, they may also occur as a combination. Furthermore, social media works as a tool for producing fresh and exciting content, whether it would be reviewing products, services, apps, brands, or holiday destinations. In other words, there's no limit to it.

One of the great AI applications is a chatbot. A chatbot works as an imitator of human intelligence by understanding consumers’ requests and questions as well as fulfilling online purchases (Chaffey & Ellis-Chadwick 2019, 251). At present, chatbots are becoming increasingly popular. Numerous companies either use Facebook Messenger or their own websites to incorporate bots (Polson & Scott 2018, 111). Most of the time, a chatbot is implemented for the purpose of boosting the efficiency of a customer service department; however, data collected through Facebook Messenger can improve organisation’s digital marketing performance through its competence of data analysing. (Chaffey & Ellis-Chadwick 2019, 251.)
Figure 4. Sephora chatbot (Facebook 2019).

The image above shows an example of how Sephora’s chatbot works on Facebook Messenger.
Figure 5. Sephora chatbot (Facebook 2019).

Sephora's example just shows how quickly valuable content can be delivered to consumers. Even though this example is based on making sales through social media, the information gathered can help marketers to manufacture content material based on choices made with company’s artificial assistant.

As the author understands, as tech progresses, chatbots will become a substantial benefit to social media marketers. For example, companies should take inspiration from Woebot. This company introduced a chatbot specifically for making mental health available to everybody (Woebot 2019). In the world, where any chatbot can understand human emotions and feelings what kind of opportunities does it provide to marketers? This enables marketers to identify what the customer wants to hear and know about the company and products/service offered.
The alternative opportunity that AI offers to social media marketing is using technology such as Influential. This AI application is based on augmented intelligence and machine learning. It helps brands to connect with the right influencers from all social media platforms to boost their brand image. The way this technology works is by using AI to examine and categorise text written by every influencer on the platform. The analysis allows companies to be aware of possible results of influencer campaigns as well as which influencer suits their organisation the best. For such technology to work, it is essential to acquire application programming interfaces (API) such as personality insight, natural language processing (NLP), and tone analyser that can be provided by IBM Watson. Companies that are taking advantage of such an AI tool include Coca-Cola and BMW. (Influential 2019.)

AI may also be used to create viral content. As previously mentioned, personalised content is the key to maintaining long-lasting relationships with customers. However, generally, marketers have an obstacle of creating viral campaigns that reach millions. Presently, when we have an endless amount of content surrounding us on social media, viral content may seem almost impossible to accomplish. Yet, Blasmetric (2019), the tech-company from Thailand, has discovered that AI technology helps to produce a viral campaign. This specific technology works approximately in the same manner as Influential as it can also identify appropriate influencers that reach the desired audience for a campaign to turn viral on social media platforms.

Big Data can also be utilized to achieve high-performance results with social media campaigns. According to Saran (2018), marketers may craft various buyer identities using data such as customer behaviour, their gender, their educational background, similar characteristics, lifestyles, and buying patterns. For instance, marketers’ crafted persona can recognize that men respond better to social media campaigns, use discount codes, and prefer more direct communication than women do. This kind of information can help to outline a social media marketing campaign. However, marketers must remember to use all the available data to later analyse whether generated persona provided the desired results.

The following are AI powered social media marketing tools:

- Rocco (2019) generates new ideas and creates posts for Facebook and other social media channels;
- Stackla (2019) assists in identifying the best user generated visual content from social media channels. This tool helps to boost brand image by sharing user generated content;
- Cortex (2019) supports in recognising the most suitable time to post social media posts.
2.6.4 E-mail Marketing

Even though e-mail marketing is one of the oldest digital marketing channels - it is still one of the most profitable. Last year’s survey managed by Litmus found that one dollar spent on e-mail marketing brings almost forty dollars in return on investment (ROI) (Ward 2019). This presents that the main objective of e-mail marketing is to sell a product through a sales pitch. Even if an e-mail is distributed to provide a kind of valuable content, it is frequently prepared with the target of selling the product/service. (Ryan 2017, 153-155.)

Sterne (2017, 191) explains that e-mails are crafted for various purposes such as delivering a thank-you message to a new client, to build a relationship, or place an advertisement. The AI tools offer an opportunity to examine what type of e-mails perform more fruitfully to produce the greatest benefit to a company.

Zeta Global (2019) offers the AI tool that aids marketers to devote less time on creating e-mail content and more time on building long-term relationships with customers. The company uses predictive intelligence to better comprehend every client at an intimate level, which allows marketers to set the right time, define segmentation, and comprehend the worthiness of content for each client. Chowhound decided to improve its operations by utilising this opportunity and received a boost of almost 30 percent in e-mail open rates and around 150 percent rise in e-mail clicks (Sterne 2017, 192).

Sterne, (2017, 192) continues by adding that AI proficient to determine the best timing of addressing e-mails, dates on which e-mails are more likely to be opened, propose subject lines, recommend layout, offer the preferred imagery of one’s customer, what colours person favours, and so on. According to Sterne, a bulk of mentioned tasks could be achieved by marketing employees. Nevertheless, the time devoted to these tasks would not be worth the ROI. Thus, the AI works as a money saver.

The additional way AI may benefit marketers to increase sales is through tailoring email promotions. Algorithms may detect patterns which portray what promotions encourage a company’s clients to purchase products (Brenner 2019). For some customers, the idea of free shipping is enough to make them purchase product/service, and for others, it may be a 20% discount on a specific coloured dress or specific computer model.

Moreover, unsupervised ML offers a chance to discover e-mail topics. Uncovering clusters of similar text, imagery, and audio data within a compilation of e-mail history (Sponder &
Khan 2018, 248) may observe managerial problems, employee dissatisfaction, digital marketing obstacles, etc.

Currently, European companies are lingering behind North America and Asia when it comes to the implementation of AI use in e-mail marketing. According to research conducted by Statista (2019), there are more Asian and North American companies utilising AI applications to improve their e-mail marketing operations. Research showed that less than 20 percent of European companies are using AI to benefit their e-mail marketing operations, where is North Americans hit above 20 percent mark, and Asians top it by reaching almost 35 percent.

The following are AI powered e-mail marketing tools:

- Phrasee (2019) generates human sounding subject lines;
- Salesforce (2019) Einstein allows marketer to know the precise time to deliver an e-mail for the best results.
3 Methodology

The main objective of this chapter is to explain the reasons for selecting qualitative research and justify the means of gathering data for this thesis. Nonetheless, before diving into research methods is essential to understand what qualitative research is and its benefits for this thesis.

**Qualitative research** is a type of research that does not intend to gather statistical information or other types of data quantification. Qualitative research outcomes are attained by analysing practical situations. Researcher’s goal by using qualitative research is to understand and explain why things are happening the way they do instead of predicting and generalising the data found. (Golafshani 2003, 600.)

The author’s understanding of qualitative research led to believe that the most suitable way of gathering data for this thesis would be completed through qualitative research. This is due to thesis intending to collect findings in regards to experiences, importance, developments, and viewpoints of using AI and AI applications in digital marketing. That is not a kind of intelligence that one can count and measure. By all means, it is imaginable to examine the volume of organisations that are implementing AI in its digital marketing processes. Though, such data is noteworthy in recognising the rise of AI applications in businesses processes, calculated and measured data is not at the utmost importance of this study. (Hammarberg, Kirkman & de Lacey 2016, 499.)

The author focused on gathering data mainly through desktop research as well as interview conducted with an author dealing with artificial intelligence. Therefore, again this just proved that qualitative research is a more fitting choice as this type of research is managed by embracing a limited sample of individuals and their thoughts and sentiments. Consequently, quantitative research, in the author’s mind, is not as applicable as qualitative research would be for this research.

The reason behind the author deciding to use benchmarking in this thesis is to locate practical examples of organisations using AI in their digital marketing processes. The author’s objective of exploiting benchmarking is to increase the understanding of what are advantages and disadvantages of using AI and its applications in digital marketing.

And finally, the desktop study provided the author with partial answers to all IQs. However, the desktop study has the greatest benefit in gathering the response to IQ1.
That is the case because of the significance to comprehend the background AI. The theory of AI cannot be determined by sentiments or diverse opinions.

3.1 Thesis Writing Process

The author saw the importance of designing this thesis into five separate segments in order to generate the greatest quantity of advantages to all mentioned beneficiaries of this thesis. The following segments highlight the thesis writing process:

- Background segment provides the explanation of choosing AI and ML as a subject matter of this thesis and the relevance of the topic to the marketing community;
- Theory segment offers the entrance to comprehend the AI and ML technologies to both, the author and reader. Mainly theory books and research papers were used in constructing this segment of the thesis;
- Results segment: by pointing out companies that are implementing AI and ML as well as mentioning the available tools and experts’ opinions, one can see that in fact, AI has an impact on a digital marketing department, certainly it comes with perks and challenges;
- Examination of findings portrays the author’s analytical perspective and overall feeling of AI’s importance in digital marketing today and in the future;
- Conclusions: sums up the overall subject matter and offers insight into the author’s own learnings and the number of restrictions that made the thesis writing process an uphill challenge.

The logic behind selecting such thesis writing design was to make sure that the author had the required amount of knowledge to make conclusions on AI’s importance in digital marketing in the future. Structuring thesis writing in the mentioned manner helped the author to offer the most significant information in each segment of this thesis, and generate analysis/recommendations to the highest standard.

3.2 Secondary Research

Secondary research has a prominent role in this thesis. Consequently, it is essential to recognise what it is.

Walliman (2011, 70-71) describes secondary data as information that has been already obtained by another person or multiple individuals. This data consists of books, and other printed material, online sources, recorded videos, and other types of material. The essential aspect of secondary data is that it requires one to evaluate the value and quality of the discovered information.

Accordingly, during the research, the author continuously had to examine the origins, the legitimacy, and trustworthiness of each source. Without a clear consideration of such factors, this thesis would not be reaching the desired level of quality. Nevertheless, due to
the topic chosen, the author had to utilise both commercial and academic texts. Furthermore, the author believes that commercial texts gave a better understanding of AI and related applications. That is mainly because of the complexity of academic texts that have been written about AI. And finally, due to the constantly changing dynamic of the topic, commercial texts proven to be more up to date source than academic papers.

The author conducted extensive research into discovering the best books available related to AI, its applications, and digital marketing. Probably, the most useful secondary data was written by Sterne and Katsov. Despite the authors being internationally recognised, as the author of this thesis, I cannot one hundred percent say that the books written are the most reliable sources. That is mainly due to the authors continuously referencing commercial sources. This imposed a desire to question the complete accuracy of the sources.

3.3 Primary Research

There was a great deal of eagerness from the author to use as much primary data as possible to receive knowledge from first-hand experiences by interviewing professionals of the technology and marketing fields. Before going into greater detail, the author wants to explain to the reader the concepts of primary data and interviews as well as their importance for this study.

Primary data, according to (Walliman 2011, 70), is the information gathered by an individual(s) on his/her own whether it would be through interviews, participating in various endeavours, designing surveys, distributing, and collecting data.

Interview, as explained by Krishnaswami & Satyaprasad (2010, 99-100), is a systematic conversation between two or more parties. Every interview must have an informant(s) and a researcher(s). The purpose of the interview is to gather data for a study. The interviews take place either face-to-face or through digital means such as e-mails, phone calls, and nowadays, they can even take place through social media channels. Informant(s) can expect to be a part of either unstructured or structured interviews.

During this study, the author saw the opportunity in conducting an interview with Lasse Rouhiainen due to his passion and eagerness to learn more about AI, and unceasingly improving his books on AI-related topics.

However, the author aimed to conduct more interviews in order to get a greater perspective and discover whether different professionals have alternating points of view.
and cross-reference them. Interviews were one of the main challenges of this thesis, though this will be discussed in the latter parts of this study.

The interview with Lasse Rouhiainen was structured e-mail interview and conducted remotely. The main intention of having a remote interview with the professional was due to the physical distance between the participating parties. The author would have hoped to manage a face-to-face interview for observational analysis. Regardless the author received a video response to the interview questions which has proved to be a practical choice for discourse analysis. Discourse analysis, in the author’s mind, was a suitable method to help in finding advantageous of the interview and its sequence.

**Discourse analysis:** the examination of components of language that last or function outside the limits of the sentence. (Collins 2019.)

The main three advantageous that the author aimed to generate from the interview with Lasse Rouhiainen were:

- To increase credibility of this thesis;
- To receive information that could not be found through secondary research;
- To portray the author’s keenness of generating the most up to date data on AI related technologies.

Keeping in mind the author’s objectives, the interview questions were designed in the following manner:

- To offer insight into AI’s transformation and experts knowledge of the subject matter;
- To provide useful/unknown tools of AI and advise to marketers;
- To prove a visualisation of what to expect from AI and its applications in the forthcoming future.

The author’s goal was to construct questions that would encourage the respondent to provide the information needed to increase the credibility and reliability of this thesis. The author is aware that even though interview conducted with Lasse Rouhiainen is a primary source because it was conducted remotely, it will not generate the desired amount of interaction to receive the volume of data that was anticipated by the author.

Therefore, the author will be utilising discourse analysis. As King, Horrocks & Brooks (2019, 269) say verbal communication and language, in general, have a dominant position in the construction of knowledge as well as forming the way people comprehend the world. As the author of this thesis hopes, the language will be used by the interviewee will present exactly the insight of how the professional is feeling about AI and his knowledge to this subject matter.
3.4 Validity and Reliability of Sources

During the research, the author learnt that qualitative research is not an easy ride. The author believes that to generate greater value research through qualitative research is more challenging than by exploiting quantitative research. This is due to validity playing a drastic role in the research. Validity can be defined as trustworthiness of person’s analyses and understandings (Silverman 2013, 285).

To validate the study findings the author aimed to assure the reader by using a mix of sources: commercial, theoretical, and primary sources. However, one must remember that the author criticises a few of the used sources. Some of the most dominant and important books in the field of studies, AI and ML, used a mixture of references to commercial texts and blog posts by professionals or field enthusiasts. This just demonstrates that AI is a buzz term about which many are keen to produce content.

Thus, the author saw a requirement to question a lot of the used sources. Even the sources suggested by the author’s mentors and professional friends have a question of reliability. By reliability, the author is referring to how precisely every source is assessed (King & al. 2019, 210).

Consequently, in order to be critical where it was appropriate, the author of this thesis asked herself the following questions:

- Has the author of the sources written books, articles, reviews on the subject matter and is she/he part of AI, ML or marketing community?
- Has anybody else reference his/her sources in other research papers?
- What are the comments and reviews regarding the source? Positive, negative or neutral?

By all means, the author does not believe that asking the above questions make this study to reach the highest level of reliability. Nevertheless, the author is confident that questioning the material chosen for this study has certainly boosted the quality of this research.
4 Insights from Field Experts

The ideal way to receive as much material as possible about AI, its opportunities and costs to the marketing community, the author chose to discover the information that technology and marketing professionals had to say in respect to the topic. The insights are divided into two parts, desktop and interview findings, which will be discussed in the upcoming subchapters.

4.1 Desktop Findings

The research conducted by Adobe has uncovered that approximately 15 percent of organisations have applied AI technologies, and this figure is going to double in the upcoming year (Navaneethan 2019). Such figures and predictions show that no matter the AI’s capabilities, organisations are excited about the incorporation of AI and its technologies to their operations. One could even question whether those organisations have a vivid understanding the opportunities and challenges it provides.

The annual research conducted by BrightEdge (2018) goes deeper into detail how marketers feel about AI’s potentials and the use of them. The study which examined the views of more than half a thousand field professionals has revealed that around one-third of the respondents that use AI for marketing purposes have an improved comprehension of their clients and more time to spare on other job duties. However, the examination also revealed that around one-third of questioned professionals pointed out that three chief hurdles of adding AI in marketing are the difficulty of incorporating the technology in an organisational workflow, lack of understating of what AI is, and non-existent funds to fully implement it. From the author’s point of view, this research illustrates that the benefits marketing professionals receive are valuable not just to a marketing department, but the incorporation of this technology would offer extensive benefits to the whole organisation. However, it must be implemented correctly and viewed like a long-term investment rather than just a tool for a marketing department.

The above quantitative data shows us an overall view advantages and disadvantages of AI’s implementation. But what are more specific issues and opportunities of AI and ML to digital marketing?

One of the opportunities and challenges is pointed by Adam Coates, Director at Apple, in his interview with McKinsey & Company (2017a). In the expert’s mind, speech recognition is one of the most thrilling tools due to continuous technological advancements. However, one challenge regarding this technology, and AI in general, is that to improve the reliability
of algorithms and patterns professionals need the entrance to annotated data, also known as labelled data. According to the expert, receiving such type of data or other types of information is extremely expensive, but also challenging due to the unwillingness of people to share information with companies.

In a different interview with McKinsey & Company (2017b), Coates recommends for organisations to put emphasis on the talent available or search for the talent to implement AI in solving marketing obstacles. The professional gives advice to build ML teams, because right now technology and employee knowledge are not at the stage where marketers can just simply apply the technologies as they wish. A marketing department needs a support group in applying technology as every other department in any organisation do.

In a recent interview with Paul Roetzer, founder and CEO of marketing agency PR 20/20, conducted by HubSpot Academy (2019), presented an example of how clueless some companies are about the benefits that AI offers. Rowtzer explains how one of the biggest manufacturing companies contacted his marketing agency in order to get help in becoming “AI first marketing organisation”. In expert’s opinion, this manufacturing company had no idea what AI is or of its benefits to their organisation. The expert claims that the only reason his marketing agency was approached was due to AI’s popularity within media. Hence, the entrepreneur recommends for marketers to evaluate their organisational needs whether they would be bringing the desired result in the department’s efficiency or attaining the company’s overall fiscal targets. According to Roetzer, some marketers might simply require an e-mail tool such as Smart Compose, provided by Gmail, to improve the productivity or achieve goals. With this the expert is aiming to convey that marketers should not have premeditated opinions about the use of AI, positive or negative, but rather weigh the value AI would offer to organisation in obtaining future goals. After all, a study conducted by Gartner (2019) discovered that ML abilities are undervalued by organisations, however ML techniques more often tend to be more useful than DL techniques. The benefits of different techniques change from one organisation to the next, but it is not smart for companies to deep dive into DL without exploring benefits of lower cost technologies.

Speaking of the future, marketing guru, Neil Patel (2018), provides a shocking assumption of how AI and marketing will be working together in the upcoming years. According to the expert, marketing will be implemented into such a device as a fridge or other offline devices. In his example, Patel explains how food brands will be fighting to put offline advertisements to a fridge with the help of AI. The AI will be able to detect patterns of
foods and drinks that a person is consuming. This will help the advertiser to provide personalised information through a fridge. It will allow to convince to change a brand, try a new product or maintain offering data that keeps person interested in purchase the same product(s) all over again. This is only one of the examples, but such AI potential would open a new set of doors for marketers everywhere. According to Patel, the rise of such technology will boost a need for persuasive advertising.

According to Patel, another advancement that we are going to see is with chatbot technology. The expert claims that with the increasing volume of data available for AI to analyse, chatbots will have the skills required to communicate like any other individual. With this point, Patel also notes that laws will play a giant role in how technology will progress. Since European Union (EU) has stricter legislations regarding the use of data and technology, some of the technology that potentially will be used in the United States of America (USA) might never reach the EU. These aspects will have an impact on the way marketers work in different parts of the world. But who is to say, maybe AI capabilities will become so powerful that the EU laws will have to loosen up to boost the productivity of companies? Otherwise, businesses operating in the EU will not have the same level of competitiveness as Asians and Americans.

An additional recommendation that Patel (2019) makes is for marketers to focus more on producing content that would help to appear first on the SERP. The way he recommends it to achieve is by creating content which contains short sentences. This is due to people becoming more willing to use voice search to look for information on Google or other search engines. However, the expert notes that content creators must commit to manufacturing sentences of precision and point. That is the way people search and will be searching while exercising a voice search.

Substitutes in finding the information that people desire such as Siri or Alexa, according to the researcher, Jon Young, will impact the way marketers advertise on social platforms. The researcher states that as technology evolves, there will be less use of YouTube or Facebook ads and any type of content will be provided by one's personal virtual assistant without any commercials. The professional states that this will spread a wish from customers to receive traditional marketing such as brochures as people will be longing to own a tangible piece of advertisement in the world full of cloud. (King 2019, 61-62.)

In the world full of cloud, professionals will necessitate for broader creativeness and imagination. That is the point Sebastian Thrun, entrepreneur, is trying to make in his TED (2017) appearance. The expert believes that the AI’s power to undertake repetitive tasks,
which a lot are still completed by humans, AI will provide opportunities for marketers to centre more towards consumers and their creative marketing desire. The author believes that this topic made by the professional is extremely pivotal to the marketing community. As a millennial, the author understands that her generation, Generation Y, and younger individuals desire for “wow factor” from marketers which is difficult to obtain.

Similarly, Salesforce (2017) also notes that AI helps to dedicate more time for other tasks and leave the repetitive errands for machines to complete. Furthermore, Salesforce also points out three other ways that AI benefit and will be benefiting marketers in the future:

- AI helps to improve marketing due to its capacity of thinking and performing rapidly which aids in examining and learning from data that is continuously gathered by organisation.
- Rapid decisions can be created by using AI, because after it obtains the knowledge to conduct daily tasks and discovered behavioural patterns, then it can make speedy judgements on designed principles.
- Organisational accuracy is increased with the assistance of AI as it is capable to ignore miscalculations.

Salesforce (2017) explained how they managed to leverage AI’s perks to help Coca-Cola with its marketing. Salesforce used its technology, Einstein AI, to travel through tones of information as well as different marketing theories to uncover patterns/clusters which helped Coca-Cola to comprehend how their consumers behave. In the end, this technology proved to be a smart option for the company.

Despite the perks mentioned above, Salesforce (2017) continues by urging marketers to not let themselves entirely commit to technology, but rather use AI to pair with current tech practices.

Since many specialists are unaware of what will happen with AI and related technologies in the future, marketing specialists, Kwan (2018), suggests for the employers to invest in their employees’ knowledge about AI. Kwan gives the following recommendations:

- Encourage marketers to take part in AI seminars;
- Subscribe to AI specialised content i.e. journals;
- Have internal discussions with AI experts;
- Employ individuals that are eager to learn about tech and marketing relationship;
- Allow marketers to experiment with different AI tools.

Though investing in staff may seem unnecessary, it is essential in having the skills to realise when and what AI tools are the most appropriate for an organisation to succeed with their digital marketing strategy. That is a type of perk that no company should be able to afford to miss.
4.2 Struggles and Limitations of Using AI

As already discussed there are numerous benefits that AI delivers to marketing professionals. However, nothing comes easy or without a cost, likewise with AI and ML.

From the author’s point of view, even though chatbots are extremely useful, they may also be a struggle for individuals that are not that fond of the technology. As a millennial, the author does not find an issue in communicating with a virtual assistant or receiving premeditated answers to questions. However, a person of an older age may not enjoy the experience of talking with a robot. This may lead to customer dissatisfaction and brand disloyalty.

Previously in this study, it was mentioned that AI works as a money saver. Even though it is true to a certain extent, AI is not at the level of working completely without professional help. Not all computerised systems have the same level of creativity that artists do. Marketing professionals are certainly not artists; however, they are quite likely to be the most creative professionals in the field of business.

Probably one of the greatest issues of using AI is privacy. Organisations tend to misremember that stored data does not belong to them, but rather to their clients. Hayward (2016) gives advice to organisations by telling them to secure consumers’ privacy, ask for permission to use data, and always obey consumers’ preferences. To take advantage of the data offered professionals must be courteous. Therefore, to sustain from frustrated customers, organisations must safeguard the data that their clients provide and make it transparent that to their customers, continuously ask for authorisation to use data, and ask what are the preferences of clients. After all, marketer’s job is to build relationships and not to wreck them.

Data, however, does not only produce opportunity but can also increase any company’s expenditure. Despite data being free, storing data is an immense expense to organisations, and stockpiling bad data is an unnecessary cost that should be avoided (Redman 2016). This means that organisations with small budgets do not have the same opportunities as global enterprises. Storing data can cost thousands upon thousands of euros if not millions, and with an increasing amount of data, it is becoming a prominent challenge to companies. Hence, marketers are fighting to have the same possibilities as others do. It may be complicated for corporations to determine what data to save and what data to remove. Operating such a process has its downfall due to a marketing
department potentially losing data that could retain their consumer loyalty or other critical information.

In spite of algorithms producing an enormous opportunity to marketers, it also provides them with a challenge. It is pivotal for marketers to remember that algorithms are logical conversely human behaviour occasionally cannot be rationalised (Hayward 2016). Therefore, marketers are potentially neglecting an opportunity that an algorithm could not discover.

The author would also like to present one of her personally recognised AI limitations. One of the author's family members is a massive Formula 1 enthusiast. Since as long as he can remember he has been supporting Scuderia Ferrari F1 team, therefore, he has performed tones of search engine searches concerning Formula 1 and its teams. Consequently, this family member persistently receives social media ads and other content in regard to this subject matter. He has appreciated receiving such a variety of content, notably when he receives discounts to goods that he might be engaged in purchasing or content to read. However, Zalando brand made a terrible mistake by suggesting Mercedes AMG Petronas shirt to purchase for this family member. Though, the problem lied in the captioning of the product: *Support your favourite team by purchasing their shirt*. Such an encounter did not make a pleasant impression on the customer of the brand, and it has discouraged purchasing products from Zalando again.

Hence, wrong algorithms and predictive analysis can prompt losing shoppers or making users dissatisfied with marketing experience. It is entirely possible that the person has sought for information about Mercedes AMG Petronas more times than for information about Scuderia Ferrari, but that does not necessarily mean that Mercedes AMG Petronas is that person's favourite team. Thus, organizations must be careful and follow-up on analysis and see how prospect/consumer is reacting to advertise content/ads.

4.3 What to Expect in the Future?

Thanks to AI technology many factors of our daily lives will change. One of those things will be related to the way we search online. Rouhiainen (2018, 79) believes that as AI is improving at processing language, more tech users will be switching to voice search which will alter the way keywords are used. A similar point was made by Patel (2019) as well. This suggests that SEOs will be impacted. As the author of this thesis, I do not completely believe that this will affect marketers as much as both professionals claim. I believe that this is a matter of feeling comfortable. A lot of people that do online search do not feel comfortable searching using voice search due to privacy concerns, awkwardness
and flexibility. Hence, even though voice search may become more common, there might be limitations which prevent users to fully utilise this technology. In the author’s mind, a voice search will be used more widely, but not to the magnitude that professionals are claiming. Nevertheless, the author suggests for marketers to keep track of the developments in this technology, and studies that are being produced portraying likability, benefits, and any potential disadvantages voice search might create for marketing.

Furthermore, based on the materials read by the author, the overall opinion of the author of this thesis is that marketing professionals should not be expecting to lose their jobs over the implementation of AI and ML technologies. Even more so, the author believes that in the future there will be more job positions available at higher managerial level than there are today. Study conducted by Capgemini (2017) suggests exactly that. This 2017 study showed that 4 out of 5 companies created new jobs positions thanks to implementation of AI. Therefore, marketing professionals should not be afraid to embrace AI applications, but rather educate themselves and more opportunities will be in front of them.

Another factor that likely will have impact the job market is emotion intelligence. Most likely for years to come computers will not reach the level of emotional intelligence that individuals have in possession. On the other hand, it is possible that it will never have the same emotional intelligence as we obtain to solve social problems (Rouhiainen 2018, 142) or emotional intelligence for ad creation etc. Therefore, marketers acknowledge that such skill will be a massive asset in opening job prospects.

Personally, the author of this thesis believes that AI will be humanised in the way where all individuals are not afraid of terms such as “robots” or “artificial”. Potentially AI might be even renamed to make consumers more willing to share information and communicate with virtual assistance. At least from professional point of view that would be a right path to follow for marketing professionals. From author’s point of view, such change would provide more prospects to digital marketing community.

4.4 Interview Findings – Lasse Rouhiainen

The interview conducted with Lasse Rouhiainen globally recognised AI author and lecturer, provided a general perspective of AI’s role with digital marketing. It also gives the reader an idea of how quickly AI is transforming. The interview questions were delivered to interviewee through email, and the author received a video response. The interview took place on May 3rd, 2019.
The purpose of the first question was to uncover how the importance of AI has changed since the beginning of Rouhiainen’s professional career. His response was:

I started so long ago that the change has been huge. The impact it has now is huge and it used to have almost none [importance]. The reason for that is social media. Right now, we have so much social media. Most of the social media and digital marketing works thanks to AI. We have more data. More data can be used for that [development of AI and digital marketing’s relationship].

The second question focused on defining more precisely what digital marketing areas are benefiting from AI and ML. This is what Rouhiainen had to say:

I can show you [opens a page]. Basically, where there is data, AI can be applied in digital marketing. I will send you the link. I would suggest you open the link yourself and mention it.

The following are the areas that were noted by Rouhiainen in his video response. He refers to Smart Insights (2019) as his source for the answer to the author’s question. Some of the fascinating areas, chosen by the author, from the referred source, Smart Insights:

- AI manufactured content;
- Voice search i.e. via Google or other apps that support it;
- Predictive analysis;
- Website and app personalisation to individual needs/desires;
- Marketing automation.

The aim of the third question was to discover what are the hurdles of AI and ML in the professional life of marketers. The following is what Rouhiainen had to say:

The biggest challenge is how to use it correctly, because if we just say that this tool uses AI, many times that is not true. That [AI] is hyped. So, the problem is, how do we use it correctly?

Another challenge is to avoid all kinds of fake news and fake content that can be created by AI.

Also, there is a challenge of tools. For example, right now a company can invest a lot of money [into AI applications]. But for many smaller companies, the question is how could they be successful as well [since they cannot afford them].

The second last question was asked due to the author’s curiosity. The author desired to learn what tools does Rouhiainen use personally to enhance the proficiency of his work. To the author, it seemed that a professional that writes books about AI would have a great insight regarding tools available. Rouhiainen’s response:
Directly – none. But the, indirectly, for example, I have my books on Amazon, and it uses one of the best artificial intelligence available in the world. For instance, if somebody is searching, or let us just say, if somebody is spending a lot of time reading about my book algorithm gets a notification about that, and then it sends a direct email to that person [recommends purchasing it/reminds about the book etc.].

Also, I would like to say that all the other tools that I use, in some way, shape or form use AI.

The interview concluded with the author’s objective to get into expert’s views of what is the future role of AI in digital marketing. Rouhiainen responded to the author’s question by saying:

Everybody should use AI tools [to benefit from it in the future]. But most importantly, there is a need of more tools. Right now, the tools that are available are not so good [compared to what they could be]. We need more tools that a better [quality] and cheaper, especially, for data analysis.

### 4.5 Interview Analysis

The author was satisfied with conducting at least interview for this research. Regardless, the author felt that the answers received did not provide a wide insight into the field of artificial intelligence and digital marketing.

Largely, Rouhiainen gave a general idea of AI’s progression and its abilities. However, the expert did not perform a deep dive into the topic. Therefore, the author only received macro-level insights. The author wished for the expert to unveil some “secrets” or deeper revelations about AI and its relationship with digital marketing.

Nevertheless, Rouhiainen provided some examples to argue his points such as Amazon and how he benefits from artificial intelligence. Furthermore, the author feels that the expert had excellent knowledge of basics in artificial intelligence applications and it capabilities, but the answers provided by Rouhiainen did not display any examples of him having deep understanding of what the future holds for AI and digital marketing.

Still, the interviewee provides with confirmation that artificial intelligence increases the competition between small and big size enterprises. Despite AI facilitating companies in saving money, companies must have capital available to invest into artificial intelligence tools. Rouhiainen’s confirms even though there are AI, ML and DL tools available to all, many of them are either not worth devoting capital into or are just simply too high-priced for small firms to afford.
Besides Rouhiainen also makes a critical point about fake news that AI may generate. This is pivotal for SEO optimisation as search engines are keen to punish content creators that manufacture and publish misleading information.

Furthermore, the expert’s answers imply that it is essential for employees to learn about AI and be encouraged to gain hi-tech skills. Marketers that boost their knowledge and increase their competencies will be more likely to recognise which AI, ML or DL tools fit best to meet marketing needs.
5 Conclusions

The main objective of this chapter is to conclude the outcomes found to investigative questions and to uncover whether AI is actually revolutionising digital marketing. Additionally, the author will explain the restrictions occurred and personal learnings obtained during the thesis writing process.

5.1 Main Findings

The purpose of the first investigative question was to portray the current and inevitable relationship between artificial intelligence and digital marketing. The desktop research has shown that AI, ML, and DL technologies are nowadays commonly applied to digital marketing activities. The study of different levels of artificial intelligence portrayed that weak artificial intelligence has been playing a role in digital marketing activities for some years now. The research also indicated that strong artificial intelligence is forging its ground in digital marketing, especially in the fields of visual recognition and voice search.

The author examined two main kinds of machine learning. Supervised learning is more common than unsupervised learning, but as stated before, it is very tough to distinguish the difference between the two. One thing is for certain, ML capabilities are able to undertake repetitive tasks and allow marketers to contribute their time to tasks which machines are unable to execute. Reinforcement learning, however, is more powerful and can assist professionals in completing tasks that require more creativity. The research has illustrated that well trained algorithms with the help of machine learning are able to work just as well as marketing professionals do. Therefore, with the right amount of data ML technology is a massive advantage for any organisation at any department.

The second investigative question required desktop research and an expert’s advice in gathering information of possible benefits that AI is providing to marketing community. The qualitative research provided the reader with the insight into the benefits that AI provides to content marketers. AI benefits content marketing by helping marketers to personalise visual and written content to each individual’s preferences. Moreover, AI on its own can create content that is not personalised. The patterns and insights generated from image recognition and basket analysis provide marketers with content ideas. This allows marketers to spend less on forming ideas. Also, the ideas suggested by AI are possibly more valuable than brain-stormed ideas by a marketer since they rely on customer insights.
The qualitative research also indicated that current AI tools can assist marketers in boosting company’s website performance on search engines due to numerous analytical tools available right now. The new applications and software are able to specify which content achieves higher SERP listings than other content. Furthermore, these tools can specify whether marketers will be able to deliver the desired emotions with the published content or not.

The rise of new technologies is also impacting visual and voice searches. AI-powered tools benefit marketers by providing auto-generated captions that allow websites to appear higher on SERP.

Similarly, the qualitative study showed that social media marketing is positively affected by artificial intelligence tools. The AI tools provide a benefit of crafting more personalised social media posts/ads, allow marketers to identify the right influencers to match the company’s brand. One example of a useful AI tool is a chatbot which allows companies to connect with clients without human interaction. The rising ability of chatbots to understand human emotions is breaking the barrier of consumers feeling uncomfortable talking to virtual assistance.

Furthermore, artificial intelligence is aiding e-mail marketing by helping to customise e-mails to everyone’s preferences, but also by analysing which e-mails perform the best under various circumstances.

The third investigative question required to answer if there are any negative aspects of using AI in digital marketing. The qualitative research has shown that even though AI tools can complete tasks just as individuals do, there are also circumstances where the algorithm may be incorrect or misrepresentative of the real user profile. Despite algorithms improving with time as they get trained, there are instances where multiple people are using a device in which cases algorithms do not show real user behaviour.

Another challenge is that there is a lack of knowledge among the marketing community. However, the research indicates that this challenge could be easily overcome if organisations were willing to invest more resources into AI.

Moreover, AI is an expensive tool which not every organisation may afford. Therefore, small companies and sole traders have to evaluate whether it is worth investing into new technologies. However, this is not really a disadvantage, but rather an obstacle that
organisations have to overcome. Similarly with data storage, for big enterprises storing data is a minor expense, but for a sole trader it could be unaffordable.

Furthermore, marketers have to be careful with content generated by their AI tools, because publishing misleading digital content could prove to be more harmful for high SERP listing. After all, climbing up the ladder is more challenging than climbing down.

The second last question aimed to seek information into the future of artificial intelligence in digital marketing. The author found four main future aspects that AI will impact:

- More jobs will be available at higher ranking marketing positions in the future.
- Emotional intelligence will be a more appreciated competence by employers since it is extremely unlikely that machines will ever reach the same degree of emotional understanding as humans have.
- Technologies such as chatbots and voice search will change the way we communicate with clients and the way we advertise products i.e. Neil Patel and his example of advertising through a fridge.
- Soon we should see personalisation of content, websites, and apps like we have not seen before. Consequently, it will be more difficult to create “wow” kind of marketing material.

The last investigative question of this study tried to discover what are the methods that marketing professionals should use in approaching AI. Regarding this topic all experts have a similar opinion: marketers need to be taught how to use AI and keep learning about it as technology develops. Firstly, marketing professionals need to spend independent time learning about AI and its capabilities, however, marketers also require a support system which must come from higher management. Since technology is developing at a drastic pace marketers must be open to learn and explore different technologies.

Additionally, the author would like to suggest for marketers to work on their soft skills. As AI will be responsible for fulfilling repetitive tasks, skills such as empathy and positive attitude will help to establish how far one advances with his/her career.

To conclude, the author hopes that examples of companies incorporating AI, such as Coca-Cola and Zalando, for marketing purposes provide an underlying requirement for companies to explore new technologies. Ultimately, the AI as well as ML are shaping the way digital marketing is performed now and in the coming years.

5.2 Restrictions

The author realises that there were three major limitations to this thesis: lack of respondents to interview questions, time restrictions, and availability of desired sources.
The author is aware that there are a couple of key issues that may have impacted these restrictions.

Despite the author contacting numerous professionals in technology and marketing through all possible means it was challenging to identify professionals who felt confident enough to talk about AI and ML and share their thoughts about it. Even though the author had a few promising leads, due to timing or other restricting issues, potential respondents were not interested in taking part in this study. This could be mainly caused by the lack of time the author had available to write this study.

From the beginning of this research, the author travelled through a wild wind experience. During the thesis writing process the author worked full-time at INS Trade Media Service, and writing the thesis after a full day at work proved to be challenging. Therefore, the author could not dedicate as much time to thesis writing as she would have wanted to. The author would have been a lot more satisfied with her work if she had had at least a month or two more to finalise her thesis. However, to achieve personal goals of graduating ahead of the planned schedule, the author had to work under an intense amount of pressure.

Furthermore, the author aimed to attend networking events which could have provided more leads in finding interviewees. However, due to time constraints, the author did not find a sufficient amount of time to attend such events and opted for gathering interviewees through digital means. Nevertheless, working and writing this study provided the author with an opportunity to gain invaluable experience of time management. Without time management, this thesis could not be possibly completed in a very short period of time.

Ultimately, the last limitation that the author experienced was discovering the desired sources at the disposable amount of time. The author found a number of valuable sources, though some were at least a couple of years old. It may sound like a couple year old sources are not old, however, from a technological standpoint a couple of years is a long period of time. Nonetheless, the author imagines that with a sufficient amount of time it could have been possible to uncover more material written and peer-reviewed from 2018 as well as 2019.

5.3 Own Learnings

The author believes that writing thesis on AI and ML has been a great opportunity for her career. Obtaining a great deal of knowledge in current and emerging technologies is a great benefit to the professional career. It is under question whether the author will ever
be completing such an extensive research, therefore, the author is overjoyed with the experience it has been even though it was not completed without personal sacrifices.

The author learnt the most from the difficulties experienced during the thesis writing, and the overwhelming amount of information found on AI. Due to the popularity of AI as a topic in the media, it was challenging to decide what to keep and what to eliminate from this thesis. This taught the author how to analyse vast amounts of sources.

The overall research process taught the author the importance and difficulties of qualitative research. The author anticipates that such factors will be of great usefulness in her professional career.

In the near future, the author anticipates being employed in the digital marketing field. The theory related to the artificial intelligence and its anticipated projections will positively contribute in finding the future professional home for the author.

To be an entrepreneur has never been an option to the author due to her unwillingness to take risks in life. Nevertheless, the author decided to take a risk by selecting a complicated thesis topic of great interest. As we all know, there is no reward in life if we do not take any risks. Let us see how far this risk will take the author.
References


Hayward, M. 2016. Digital marketing: oops, your algorithm is showing. URL: https://www-warc-com.ezproxy.haaga-


Appendices

Appendix 1. Interview Questions

Lasse Rouhiainen, Lecturer and Author of AI and social media books, e-mail interview with video response

1. How important do you think artificial intelligence is to marketing today compared to the beginning of your professional career?
2. Could you discuss what digital marketing areas are benefiting the most from artificial intelligence and machine learning?
3. Could you discuss some of the challenges that artificial intelligence and machine learning are bringing to marketing professionals?
4. Currently what artificial intelligence technologies are you using to benefit you professionally?
5. In your opinion, what will be the future role of artificial intelligence in digital marketing department?