ARCADA

Artificial Intelligence in Digital Marketing

Now and in the future

Jimmy Holmi

DEGREE THESIS	
Arcada	
Degree Programme:	International Business
Identification number:	**22215**
Author:	Jimmy Holmi
Title:	Artificial Intelligence in Digital Marketing, Now and in the future
Supervisor (Arcada):	Kaj-Mikael Björk
Commissioned by:	

Abstract:
This is a study conducted in the field of digital marketing with the usage of AI, the aim of the study was to find the impact that AI currently has on digital marketing and what it could look like in the future. The structure is divided into five different sections, introduction, method, literature review, results, and conclusion. Introductions explains the basics of AI, as well as the setting and process of the study. The theory part was crafted from various scientific articles found online and some websites. The literature review goes deeper into different forms of AI and how they work, it also separately explains the basics of digital marketing and how forms of AI can be used in digital marketing. In the result section the interview material is written down and discussed around the topics that are explained below. The references were picked with the date in mind, and they go through some of the technical aspects of AI and Digital marketing and, also how it is used combined. Limitations include participants that work in Finland in the digital marketing industry and have experience of using software with AI. Material was gathered through semi-structured interviews. 5 participants were interviewed that work or have been working in the marketing industry and have used or are using AI in daily work. After the interviews were analysed with a thematic analysis were the author tried to find similarities around the data and puzzle them together for information on how AI has impacted the digital marketing industry.

Main results consisted of automating repetitive tasks, improved optimization, improved efficiency therefore after an initial investment saving time and money if done right. Conclusion mentions that AI can greatly benefit the field of digital marketing but requires for marketeers to be ready for change and eager to learn new things.

Abstrakt:

Detta är en studie genomförd inom digital marknadsföring med användning av AI, syftet med studien var att hitta den inverkan AI har på digital marknadsföring och hur det kan se ut i framtiden. Strukturen är uppdelad i fem olika avsnitt, introduktion, metod, litteraturöversikt, resultat och slutsats. Introduktioner förklarar grunderna för AI, samt inställningen och processen för studien. Teoridelen har skapats från olika vetenskapliga artiklar som finns online och på vissa webbplatser. Litteraturöversikten går djupare in i olika former av AI och hur de fungerar, det förklarar också grunderna för digital marknadsföring och hur former av AI kan användas i digital marknadsföring. I resultatsektionen skrivs intervjumaterialet ner och diskuteras kring de ämnen som förklaras nedan. Referenserna valdes med datumet i åtanke, och de går igenom några av de tekniska aspekterna av AI och digital marknadsföring och också hur den används kombinerat. Begränsningarna inkluderar deltagare som arbetar i Finland inom den digitala marknadsföringsbranschen och har erfarenhet av att använda programvara med AI. Material samlades in genom semistrukturerade intervjuer. Fem deltagare intervjuades som arbetar eller har arbetat i marknadsföringsbranschen och har använt eller använder AI i det dagliga arbetet. Efter att intervjuerna analyserats med en tematisk analys försökte författaren hitta likheter kring data och pussla dem tillsammans för information om hur AI har påverkat den digitala marknadsföringsbranschen.

De viktigaste resultaten bestod av att automatisera repetitiva uppgifter, förbättrad optimering, förbättrad effektivitet, därför efter en initial investering sparar det tid och pengar om det görs rätt. I slutsatsen nämns att AI i hög grad kan gynna digital marknadsföring men kräver att marknadsförare är redo för förändring och ivriga att lära sig nya saker.

INNEHÅLL / CONTENTS

Figurer / Figures

FOREWORD

Before you lies the thesis "Artificial Intelligence in Digital Marketing, Now and in the future", the basis of which is a set of interviews conducted with industry experts that was based in Finland. It has been written to fulfil the graduation requirements of the Arcada, University of Applied Sciences.

The research was conducted to help digital marketeers and employers get a better understanding of the great benefits with implementing AI. It turned out to be a difficult one that would take quite some time but is now ready.

I would like to thank my supervisor Kaj-Mikael Björk for the excellent help he provided me when needed. I am also grateful to all the participants that accepted my request to interview them for this thesis. Without them I could not have done it, literally.

Even if losing interest happened occasionally the interested towards the subject help me finish this study and I feel grateful to be able to make it.

I hope you enjoy reading this.

Jimmy Holmi

Helsinki, April 29, 2021

1 INTRODUCTION

1.1 Background

What is AI (Artificial Intelligence)? Majority of different industries have heard about it, and many already have it implemented in their daily tasks. Artificial Intelligence has been in the spotlight for some time now. It is a complex and broad subject. Defining Artificial Intelligence may be challenging to do because of its nature, but the author will characterize it as a human-made software in computer science for the intent of imitating human work. (McCarthy, J., 1998). A collection of sub-fields is included in Artificial Intelligence:

- Machine learning
- A neural network
- Deep learning
- Cognitive computing
- Computer vision
- Natural language processing

Machine learning automates the development of theoretical structures. Methods from neural networks, mathematics, operations analysis, and physics are used find different forms of data without letting the software know about certain structures or what to search for.

Neural network is a form of machine learning, that consists of coordinated neurons that process information by reacting to external inputs and transmitting information between units.

Deep learning utilizes massive neural networks with many layers of processing units to learn complex patterns in large amounts of data, taking advantage of advancements in computing power and advanced training techniques. Common implementations provide identification of photographs and expression.

Cognitive computation is an AI sub-field that attempts a normal, human-like computer communication. Through AI or cognitive processing, the final goal is to realistically simulate

experiences from a computer, so that it can be understood through objects and voices and to create an accurate response related to humans.

Computer vision is for acknowledging what a picture or video material is displaying, it uses pattern recognition and deep learning to create the process. We may capture images or videos in realtime and display their surroundings while machines can process, analyze and comprehend ob jects.

The ability of machines to understand, comprehend and generate human language, including voic e, is the natural language processing (NLP). NLP's next step is natural language communication, allowing people to communicate with machines using ordinary, everyday language to perform ta -sk. (SAS, 2019)

1.1.1 Artificial Intelligence in Digital Marketing

Marketing, especially Digital Marketing, would be the area that will have the most leverage of Artificial Intelligence. Businesses have begun to keep up with current patterns slowly but surely in the last year. The author believes it is still relatively minimal and could be used to a greater extent. Since 1959, Artificial Intelligence has been around but before it was seen as too expensive and risky to engage in from the perspective of a corporation. Recently, marketers have gotten up-to-date, and businesses are slowly starting to notice the great advantages it can offer to the company. This is a collection of properties that a Digital Marketer in business could use and is of great value:

- Creating and generating content
- Curation of data
- Email Marketing
- Digital advertising
- Web search
- Chatbots
- Predictive analysis

For quite some time now, content creation by methods that use Artificial Intelligence has been in use. Such methods are used by journalists to produce posts. The method analyzes previous data a nd information and generates a copy of an article to be published.

Curation of Data is widely used to make custom product suggestions that the consumer will find useful, such as the usual "people who buy X buy Y as well," as we see on Amazon continuously. The recommendation feature of Netflix will also provide you with reviews for movies and TV shows that you may find interesting.

In Email Marketing, previously mentioned machine learning will evaluate loads of product data to determine the optimal time to send, including the optimal frequency, the material that best suits that individual consumer, and what kind of titles and subjects they want to read.

In Digital advertising, for example, ad platforms from Facebook and Google already use machine learning or artificial intelligence to identify people more likely to take the required action of the advertiser. To do that, they evaluate data about the customer, such as their preferences, backgrounds, and other things to understand and identify the best audience for their product.

Artificial intelligence has made two major advances that have revolutionized Internet searches and search engine optimization (SEO): voice search and Google's algorithm, RankBrain. To get much more relevant search results, Google's machine learning algorithm, RankBrain, was developed. It interprets the voice searches of the user and provides the user with the best results depending on what it learned from the vocabulary and meaning of the user using the strength of AI.

Moving to Chatbots, Chatbots make the process of automating answers to frequently asked inquiries from potential buyers much simpler by offering them a way to find the product or service they are searching for.

There are several fields where predictive models can be implemented, and advertising is no exception. Such models allow the possibility of a particular prospect becoming a customer to be expected. Certain factors can also be predicted such as the quoted price needed to make a transaction, or which consumers are more likely to make more than one order. The trick here is to note that predictive models are just as strong as the information you provide when you build them. Therefore, if your information includes inconsistencies or a high level of randomness, it will not be able to make predictions that are right or reliable.

Thanks to the information which acts as a forward-thinking component, Predictive AI software can turn marketers from reactive to strategic planners.

1.2 Objective and Aim

This study aims to discover different methods and tools for Artificial Intelligence that is used in digital marketing. The research even tries to find out how Artificial Intelligence technology is developing and supporting digital marketers. The main objective is to conduct interviews with digital marketing professionals.

The research questions (RQ) are:

RQ 1. What is the impact of Artificial Intelligence in digital marketing today?

RQ 2. What will the future look like with AI in digital marketing?

1.3 Setting and Process

This study is designed to be observed with a creative Marketeers perspective and analysed via companies that could use the information for developing their sector in Artificial Intelligence (AI). The study is constrained by the field of digital marketing but will not be constrained by companies. The interviews will be conducted from participants through Nordic based companies.

The main restriction of the study will be the limited amount, of academic studies that have been conducted in Digital Marketing related to Artificial Intelligence. Technology is a continuously changing field, and it is hard to predict the future.

All methods that are being discussed are evolving repeatedly so the author wants to make it clear that the intention of the research is not to make future predictions but to explore the possibilities and benefits of AI tools in Digital Marketing.

1.4 Limitations

There is a lack of previous research done precisely on the same topic as the author which might create partially biased views. Interviews are conducted by asking the participants about their own feelings and experience which might result in different opinions depending on their work knowledge and experience. Time constraints can be visible in the interviews which might result in varied answers. Some of the research questions can affect the interviewees on personal level more than an experience level which means that they results might vary depending on the person.

1.5 Thesis Structure

The structure is divided into five different sections, introduction, method, literature review, results, and conclusion. Introductions explains the basics of AI, as well as the setting and process of the study. Literature review goes deeper into different forms of AI and how they work, it also separately explains the basics of digital marketing and how forms of AI can be used in digital marketing. In the result section the interview material is written down and discussed. Conclusion concludes the results and answers the research questions.

2. THEORETICAL FRAMEWORK

Chapter aim is to present AI's key concepts related to marketing and allow the reader to become acquainted with AI's background and development.

Countless millennials have certainly been oppressed with the data that has been collected throughout the years, a lot of it without anyone ever reading the terms of the policy. Still from a marketing perspective, an individual should try to see it as a benefit for future work and research. A decade ago, it was hard to understand how much data would be worth today. Today offers countless different benefits creating and refining the operation of businesses.

AI is the art, method, and engineering ability to create intellectual software, computers, and other machines, according to (McCarthy, J., 1998, p. 2). McCarthy explains "intelligence" as a computing element capable of achieving the goals of the world. But (McCarthy, J., 1998, p. 3) says that comparing human intellect to computer intelligence, does not further improve the relation humans have about being place in a software as there are many nuances in the minds of people. People tend to be irrational in their actions. Some of us are uncompromising and unpredictable. As a result, programming the human mind into a machine could not work for us. Nevertheless, AI's overall goal is to overcome issues and reach goals just as people in everyday situations would face them (McCarthy, J., 1998, p. 4).

What does AI consist of? According to (Chaffey, D. & Ellis-Chadwick, F. 2019, p. 248), a major part of AI is data, specifically Big Data, defined as heavy-level term used to describe analytical techniques and systems that harness the vast volumes of data that companies are now collecting. He also discusses the two biggest factors in Big Data.

Two main factors that are beneficial about Big Data regarding marketing are:

- Pinpointing observations such as trends and patterns by examining large and complex data sets that can inform future ideas and strategies.
- Pinpointing success factors to make interactions more important by optimizing messaging, such as selecting the best timing, copying or offers.

The US supermarket Target provides an example of the information that can be derived from Big Data. Data used about women's shopping, Target was able to identify that a woman buying large amounts of unscented lotion, cotton balls, vitamins and washcloths may mean she is pregnant anywhere from a couple of weeks to a near date.

According to (Sponder, M. & Khan, G.F., 2018 p. 2), AI works through two different types of data:

- Structured data is information that can be organized simply, such as invoices, census data, medical data, etc. It occupies a specific category after the data is collected. This type of data can therefore be easily managed as a spreadsheet.
- Unstructured data is more complicated and before intelligible results, it must be managed. Unlike structured data, a spreadsheet cannot be used to process unstructured data.

13

On the other hand, some challenges and additional prospects are also imposed by big data. Defining different dimensions of Big Data can explain these unique challenges:

Volume: The data being collected is measured in huge volumes, there are also countless sources that are being taken in account, from the social media giants to online business interactions. To maintain this knowledge, it used to be a giant issue. By using appropriate software, organizations can now solve this problem. (SAS Institute Inc 2019.)

Variety: (Chaffey, D. & Ellis-Chadwick, F. 2019 p. 249) and (SAS Institute Inc 2019) go into various types of data architectures–from structured to unstructured data, from visual data to business contracts. The list is a wide one. In conclusion, this indicates the benefit of combining a variety of data to gain insights from the buyer.

Velocity: according to (Chaffey, D. & Ellis-Chadwick, F. 2019, p. 248), Marketing professionals can access information and crucial data in real time. This allows professionals to receive critical elements and views through websites, apps, social media channels, and other channels of social media. Hence, speed is a huge opportunity for organizations.

Variability: (SAS Institute Inc. 2019) discussed ' Big Data ' as dimension variability, are usually enormous data files that professionals have huge problems with the management, especially since unstructured data is complicated to manage.

Complexity: In addition, (SAS Institute Inc. 2019) Big Data requires constant controlling and fine-tuning, this makes it complicated to manage. However, it is essential that connections, grouping and other data ties are linked and combined, because if this is not done, the data may not be workable.

Detect: AI can determine the most predictable features or characteristics in a topic. AI can recognize the most predominant features despite large amounts of information and a huge mix of data types. It can evaluate which are to be favoured and which are to be ignored. (Sterne, J. 2017, p. 5).

Decide: For a decision, AI can also take data and measure the most predictive characteristics alongside each other. It succeeds in acknowledging the important factors and categorising them to make a constructive conclusion. (Sterne, J. 2017 p. 5)

Develop: The more data AI has been fed, the more it develops. In this case you could say that more is more, and AI will constantly evolve depending on the data you feed it. AI succeeds in modifying its views on the environment along with how each factor is assessed. As a result, AI has a programming power itself. (Sterne, J. 2017, p. 5).

2.1 Machine learning

Machine learning as described by (Sterne, J. 2017, p.10) is designed to learn instead of following harsh guidelines, as its name suggests. What ML can achieve is advancing with new encounters and experiences.

According to (Chaffey, D. & Ellis-Chadwick, F. 2019), predictive models and algorithms with the ability to learn without explicit programming are created and applied. The computer models then make success predictions based on patterns from historical data. These are used to define rules to automate tasks such as targeting media or emails with the most relevant creative offer to the most valuable segments. These algorithms are of massive advantage to organizations, according to (Sterne, J. 2017, p. 8-9). The author states that a well-trained ML algorithm can do assignments on the same levels as a human, this creates the tough about it being a better option for the marketing department than some marketing staff.

(Sterne, J. 2017, p. 12-13) explains that ML searches and seeks to understand patterns. Understanding one pattern or trend helps ML apply its lessons to other organizational problems that occur. In addition, Sterne adds that ML's beauty is that it builds systems that build themselves. Machines are keen to change their views on the information they obtain instead of learning from data. Machines change the way different experiences are understood.

Machine learning is crucial in the current world we are living in, full of surprises and chaos, this gives the ability to use machine learning for learning (Alpaydin, E., 2016, p. 17).

These algorithms are of massive advantage to organizations, according to (Sterne, J. 2017, p. 8-9). The author states that a well-trained ML algorithm is capable performing tasks as well as individuals, leading to the belief that ML technologies are cheaper and more reliable assets to the marketing department than some marketing staff.

2.2 Levels of Machine learning

Supervised and Unsupervised are two different levels of Machine Learning.

(Akerkar, R., 2019, p. 79) Says that supervised learning is a kind of ML in which "output data sets" teach computer systems the expected and desired "algorithms" to produce. A doctor who supervises a student of medicine could be an example of supervised learning. This type of ML is used more frequently than unmonitored ML.

According to Goodfellow, Bengio & Courville (2016, p. 102), every time you use unsupervised learning the algorithm reads through different factors of a data and after it has gathered the information it goes forward by trying to understand the meaning behind it.

Thus, unsupervised learning tries to understand data from labelled data without any direction. Uncontrolled data is about clustering, according to Katsov (2018, p. 42). In other words, it is a data categorization method. The author continued to that this can and has been used in different forms of marketing related tasks particularly in questions related to the customer profile.

2.3 Reinforcement learning

Reinforcement learning is another type of ML that exists. According to Akerkar, R., (2019 p. 79), there is a level of learning that with the help of systematic interactions depending on the elements provided it can access that and come up with an, comprehensive answers to the said phenomena. Akerkar also talks about the fact about there being no right or wrong answer as nothing is predetermined, but there is still the possibility of the answers being better or worse.

2.4 Deep Learning

Deep learning (DL) is a different ML element using more than one set of layers of nonlinear data handling for the removal and conversion of supervised and unsupervised levels and when scouting for different mods and patterns. (Akerkar, R., 2019, p. 33). Akerkar, R., (2019, p. 33) also mentions how for example speech recognition software that use AI need DL because "shallow artificial neural networks" are incapable of managing the amount of complex data that has been given. DL is also known as "artificial neural networks" (ANN), according to Goodfellow & al. (2016, p. 13). This is because DL is built of all animals.

2.5 AI-Generated Content

In (Chaffey & Ellis Chadwick's 2019) words, for some content types, AI content Natural language generating (NLG), writing is capable of picking elements from a dataset and structuring a ' human sounding article. ' Automated Insights has applied an AI writing program called Wordsmith in several sectors:

- Associated Press generating close to 4,000 company earnings articles quarterly.
- Nvidia corporation, American technology company uses the visual analytics of programs called NLG and Tableua's to optimise internal reporting.
- Vivint an American private smart home service provider generates thousands of localised webpages, boosting SEO efforts and generating a 5x increase in sales.
- 50,000 narratives a week are being delivered by GreatCall, using the natural language generation.
- 100,000 workout recaps every week are being produced by Bodybuilding.com to help users achieve their goals of fitness.

This figure shows you the different steps of marketing with AI, through the customer lifecycle.
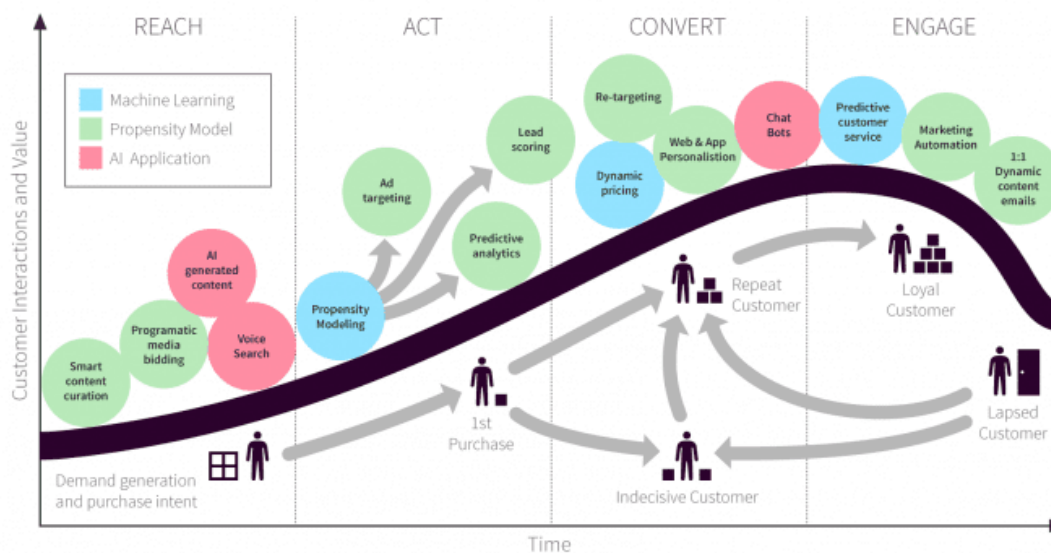

Figure 1. Artificial Intelligence through the customer lifecycle (Spangenberg, 2017)

According to (Chaffey & Ellis Chadwick 2019), these are some of the different elements that you should know about when working as a marketeer, that could be beneficial.

Smart content curation: Curating AI-powered content helps you to better communicate with the site visitors by showing them relevant content. This technique is most commonly found on many sites in the' customers who bought X also bought Y ' section, but it can also be applied more widely to blog content and to customize site messaging and services.

Voice search and conversational user interfaces: Following Amazon's initial launch of its Alex home appliance, voice search appliances or personal assistants were developed by major online platforms such as Facebook, Google, Amazon, and Apple. The assumption for marketers is that as search queries become more conversational, they must ensure that they respond to the questions posed by searching in a natural language.

Programmatic media bidding: The purchase of programmatic media can use propensity models generated by machine learning algorithms to target ads more effectively on the most relevant clients.

Propensity modelling: The purpose of a machine learning project is to model propensity. Large amounts of historical data are provided to the machine learning algorithm, and it uses this data to create a propensity model that can (theoretically) make accurate predictions of the real world.

Predictive analytics: There is set of areas where propensity modelling can be applied. Typically predicting what type of a price, a customer is likely to cause conversion, or when the customer is making a re-buy. This concept is referred to as predictive analytics because it uses analytical data to predict how the customer acts. When using propensity modelling you need to remember to have valid data, because with corrupt or wrongful data the model is not going to function in the correct way.

Lead Scoring: When machine learning is generating a propensity model it can be trained to score leads on certain criteria, giving information for a sales team to determine the importance of a lead. This can be especially important in B2B businesses with advisory sales processes, where the sales team takes a considerable amount of time for each sale.

Ad targeting: Large amounts of data can be scanned with machine learning-algorithms, this can determine what kind of advertisement are best suited for what type of consumers and what point of the point buying process. By using machine learning, thousands of variables can be continuously maximised for more optimal ad placements and content.

Dynamic pricing: Marketers know that sales can shift more products efficiently. Discounts are very strong but can damage your bottom line as well. Making a two-thirds smaller margin will end up in less profit than without the sales.

Web and app personalisation: To predict a consumer's stages in the buying journey you use to propensity models that let you predict the most relevant content. When a new customer arrives to the website the AI can recognise that and use information that would help the customer stay on the site. Furthermore, if it is a consumer that has used the website for years with data the AI can determine to show a specific set of information.

Chatbots: Chatbots imitate human intelligence by being able to interpret the inquiries of consumers and complete their orders. The common misconception is that chatbots required huge amounts of skill and is costly. Al-tough there is tons of ways to create chatbots by using open sources software, so you do not need a huge developer team.

Re-targeting: This is similar, to ad-targeting where you gather the information data of the consumers that have already visited a site. Re-targeting enables a company to use a different set of ads or information that has been determined by machine learning. With this there is a higher probability to keep the customer.

2.2 Digital Marketing

(Chaffey, D. & Ellis-Chadwick, F. 2019, p. 9) Digital marketing is when you apply digital tools and data and a variety of different technologies, to support marketing. The authors continued to say that technology results are intended to identify the level of digital marketing resources. The objective of Chaffey & Ellis-Chadwick is to let you know about a common-sense tactic, even if you obtain the newest technology that does not put you in the driving seat with it. It does not mean a win automatically.

2.2.1 Social Media Marketing

According to (Chaffey, D. & Ellis-Chadwick, F. 2019) social media companies like Facebook, Instagram, LinkedIn, Pinterest, Snapchat, Twitter, and other social networks that have majority of the users, are often recognized as the most important by consumers and businesses. But social media is much more than that. There are different methods of social media and gathering

information too. Included among these are customer communication and encouraging user-generated content (UGC), such as client reviews and consumer feedback.

He also mentions that social media advertising is focused on how we can leverage consumer-to-consumer (C2C) interactions to raise our brand's visibility by amplifying social media and eliminating negative references. To order to make efficient use of this for interaction, it is important to understand that social media entail participating to conversations and sharing ideas and information, mostly encouraged by social networks, but can occur elsewhere.

2.2.2 Email Marketing

One of the most profitable channels for marketing is still to this day email marketing. A survey conducted recently has shown that one dollar spent on email marketing can give you the amount 40 € in (ROI) (Ward 2019). Pitch sales is clearly the solution you should get out from this. Several times emails are used to send newsletters or important information for a consumer, but this can still improve the ROI (Ryan, 2017, p.153-155.)

(Sterne, J. 2017, p. 191) explains that emails are designed for a variety of purposes, such as delivering a message of welcoming a new consumer, maintaining a current customer bond, or just using the channel for ad placing. AI greatly improves the chances of analysing the emails in the right way to get the most out of every single customer. Analysing different contents of the email to see what give the right reaction from a customer.

(Sterne, J. 2017, p.192) continues by adding that AI can determine the best timing for e-mail addressing, it can figure out what type of emails have a higher chance of being opened, it can suggest different subjects, figure out the structure of the email, it also saves the previous data of a certain type of consumer so it can measure and insert the right type for a certain group of members. A marketing employee can succeed in these tasks just fine, but the amount of time saved by AI is significant for the ROI, making it a money saver.

It does not come as a surprise that European businesses are currently behind North America and Asia in implementing AI use in email marketing. according to research conducted by Statista (2019), there are way more companies in Asia and North America using different forms of AI in email marketing in the way of software and tools. North American companies have a percentage

of above 20 with the usage of AI in email marketing, Europe is at the lowest with under 20 percent, and Asia topping the stand with nearly 35 percent.

2.2.3 Search Engine Optimisation

Ryan (2017, p. 63) says that search engines are the Pot of Gold for all marketers in charge of online related tasks. It can also be said that the Pot of Gold is enormous data files and different analytics available for marketeers in 2019. Text data is capable presenting crucial ways of the customer and can build up analyses with text analysis as a structure. (Sponder & Khan 2018, p.225). Although text analysis may not seem to be linked to the SEO-this is simply not the case. Nowadays, customer feelings can be more deeply understood by text analytics marketers (Sponder & Khan 2018, p. 226). This kind of information is invaluable. The opportunity for marketers to be aware of terms such that consumers share content offers a chance to be put on the first page on each search engine. To receive a sentiment analysis, this requires ML technology, a text miner (Sponder & Khan 2018, p.227).

In a way you could imply that SEO is content, (Sterne, J. 2017, p. 150-151) explains that gathering legitimate online material is crucial for marketers. Google or Yaahoo! for example have the power in a situation where they believe it is misleading or not displaying correct information to be kicked off SERP or just list the page so deep that consumer never look for it.

2.2.4 Chatbots

Organizations have slowly but surely started to figure out the different benefits of a chatbot implementation into their business. From the point of view of user experience, they are superior in helping improve the down time of getting an answer to urgent questions and information searching. Chatbots can use natural language dialog to "orchestrate" processes across multiple applications. This improves the overall experience of a customer service situation because it is generic and gets the job done moving information faster and for some consumers, it can be crucial to the information, they need fast. On top of that they certainly provide a lower cost option for customer service in general. (Accenture, 2017).

Companies always try to find the best value in the different elements of a business and customer service is no different. Studies made by Accenture show that labour costs and high turnovers are a

big part of today. A chatbot requires very little maintenance costs after it has been properly set up and is always available to help companies achieve efficiency gains by automating business operations.

Chatbots bring tons of different organizational benefits for example enhanced customer experience, two factors that are highly regarded are the efficiency improvement and reduced overall costs. Chatbots can also help gain more sales thanks to the efficient customer service presented. It is also a modern touch for otherwise traditional methods. Chatbots have been implemented on a semi-large scale today but there is still information and knowledge to gained about all the beneficial aspects it can give.

There are many companies that adopt the chatbot technology but depending on the industry there is limited information available to help you succeed in a perfect implementation. The implementation itself has not yet been fully optimized for the different aspects.

Chatbot implementation can be placed in the category of Information Technology (IT) projects in terms of project management and change management, these factors tend to have a huge impact factor on processes, company employees and consumers. The next section provides the theoretical basis for project management processes and concepts that can be applied to the implementation of the chatbot.

2.3. Artificial intelligence solutions digital marketing

"Artificial Intelligence (AI) will change how keyword research is done. Artificial Intelligence will become more ubiquitous so that Search Engine Optimization (SEO) specialists understand the knowledge about automated learning and automation." (Dumitriu, D. & Popescu, M.A.-M., 2020.)

In the world of digital marketing SEO stands out as an essential part of a company's strategy. In SEO we have different factors that you should take into consideration when optimizing, keywords is one of these things.

"Keywords are phrases, phrases and keywords used by the user to find the site in search engines." (Dumitriu, D. & Popescu, M.A.-M., 2020.)

As stated in Procedia Manufacturing 46 (2020) 630-646, the environment is constantly changing, keywords have been a staple of SEO for a long time, marketeers have constantly been on the go

trying to find the accurate keywords suiting for promoting the company they work at, this also helps the company website get a better position on the search results online therefore giving more visibility to the company. Naturally, the key factor being attracting relevant buyers of your product or service.

"The Artificial Intelligence component of a software product should be able to make it able to learn to improve itself permanently. Machine Learning is dedicated to, providing software with the ability to learn; this goal can be achieved by using algorithms that identify patterns in the data received and, depending on them, the software system makes decisions or predictions. In the marketing-industry following the implementation of intelligent algorithms, today has grown a sub-industry branch called automated marketing. Digital marketing is linked to the latest technology trends." (Dumitriu, D. & Popescu, M.A.-M., 2020.)

Many marketers prefer to use artificial intelligence (AI) to transform data into valuable customer insights. Information gathering is an art that involves identifying the benefits of online marketing for improving information gathering and feedback (Arasu, B.S., Seelan, B.J.B. & Thamaraiselvan, N., 2020)

As stated by (Arasu, B.S., Seelan, B.J.B. & Thamaraiselvan, N., 2020) Machine learning (ML) is especially relevant in digital marketing as it helps create a coherent support system that also supports analysis. When AI was introduced into digital marketing it quickly became one of the staples in perfecting the marketing process and creating extremely efficient methods that impact several layers. The key component of ML is using it to create various insights that help the human in perfecting the material. It essentially helps in gathering data therefore creating simple insights that human have no problem implementing to the material. Big tech companies like Facebook, and LinkedIn use different methods for this, Facebook takes advantage of automated post flagging by AI and LinkedIn takes it even further and use ML and AI for almost everything, examples being, algorithms to predict the best fit for a job. ML is the key behind this as it marks the people that have the highest chance of success of picking up the role or are looking for a new job. Twitter started to crop images using AI with face detection and they also implement a way to create a thumbnail through a picture.

2.3.1 Data mining tool

"WEKA is a data mining tool that performs data analysis and produces the results needed to achieve efficient marketing." (Arasu, B.S., Seelan, B.J.B. & Thamaraiselvan, N., 2020)

Data mining is something companies are using to pursue more impactful advantages against others. Simply put mining can be divided into two separate categories that are called descriptive and predictive. Combining various ML algorithms make up the system behind WEKA, it is used with four interfaces that all have a different purpose, and it also supports various formats with the files. (Arasu, B.S., Seelan, B.J.B. & Thamaraiselvan, N., 2020)

2.3.2 Text mining

Text mining occupies a prominent position in a few research fields. On the web, just 20% of the information is organized, and the remaining 80% is unstructured information. (2020 B. Senthil Arasu, B. Jonath Backia Seelan, N. Thamaraiselvan)

In general, the information you can gain through text mining has been of high value. Simply put the goal is to create value through fetching data that could be used to improve the current strategy. This is composed of examining information as well as finding the essential data patterns. Consumers write about various matters online, one being feedback for a company's products or services. Text mining can therefore be used to arrange it into a more sophisticated model so it is easier to analyse it can eventually be used to perfect the marketing strategy. This is what we call text mining, and it is also completed by mining algorithms.

2.4 Marketing Practices & trends

Internet social media and mobile devices have dramatically increased the interactions between firms and consumers, with the information encoded in rich media formats such as text, image, and video. It is imperative for firms to understand consumer perceptions and preferences and obtain brand positioning insights based on this rich media content. (Ma, L. & Sun, B., 2020)

According to (Ma, L. & Sun, B., 2020) when rich data is available for commercial use machine learning comes into the picture. It is efficiently used for personalization and targeting. They also

state that driven by ML algorithms it can refine the process and help get more accurate and targeted methods with an improvement in efficiency.

(Ma, L. & Sun, B., 2020) also talk about the fact that the modern marketing environment is too complex for a human analyst to take full advantage off anymore. Especially when we talk about defined microsegments, this is something that requires automation at this point. If you are looking for a new method to be added into your digital marketing strategy machine learning is the way to go. ML methods deliver the needed real-time optimization we need when dealing with mobile devices.

When (Ma, L. & Sun, B., 2020) discuss the customer journey of today they mention that key factors for staying in touch with the current customer journey is by using deep learning, and reinforcement learning methods, these can help perfect it. It can help pinpoint the entire journey and will make it easier for the individual working with digital marketing to achieve the wanted results. In the end these features bring out the effectiveness of marketing to the level it should be at today.

"Meanwhile, advertising is increasingly digitized and personalized. Machine learning methods underlie many programmatic advertising tools and services, targeting users based on profile and behavioural history, with real-time bidding decisions made at millisecond timescale." (Ma, L. & Sun, B., 2020)

Moving to customer engagement (Ma, L. & Sun, B., 2020) argue that ML helps light interested in consumers by enhancing the ads delivered. Augmented reality is also used to enhance the overall shopping experience for the customer. Naturally, there is a cycle for when you buy things, after you buy something, you often get a follow-up asking how the shopping trip was, and for feedback, this is also done by ML. Then we have chatbots that are used with speech recognition and natural language processing algorithms in many cases they tend to take care of the pre- and post-purchase situations. AI is changing all of this towards a more automated version.

Recommendations use sophisticated algorithms with ML and deep neural networks this helps finalize the perfect recommendations for a consumer. This would be considered an essential part of marketing. It fits a consumer with the right products by analysing data.

3. Methodology

This chapter gives an overview of the methods used to conduct research on the impact of Artificial Intelligence in Digital Marketing. This thesis is going to study how Artificial Intelligence is affecting the field of Digital Marketing. This part is also going to look on what interviewees think about the future of Artificial Intelligence, and how it is currently in use for Digital Marketeers.

The literature review provides a comprehensive analysis of the concept and material to build a theoretical framework around Artificial Intelligence and Digital Marketing. For a thorough basis on the information needed to complete the research question, the author conducted interviews with different personalities that have knowledge about the field of marketing with implementation of AI.

3.1 Research Method and Analysis

Research method for this thesis is qualitative, because of the semi-structured interviews with open ended answers.

The definition for, primary data is data that has been created by the author for the thesis. Secondary data is fetched and collected from various databases and sources from the internet or books, that has already been published or written by someone else. (Saunders et al. 2009).

In this thesis, secondary data in the literature review was collected from the most recent published articles and from well known, books by credited authors. The primary data was collected using qualitative research methods. The results of the research and discussion conclude the findings from both data sources.

Secondary consists of the basic understanding of AI, different levels, and concepts. Furthermore, the digital marketing part of my literature review goes in on how companies are using different methods in marketing with AI implemented.

Six different interview questions have been created to best answer the research questions, these can be found in the appendices.

3.1.1 Data Collection

To able to comprehensively answer the research questions, a qualitative study was conducted by interviewing 5 experts in the field of Digital Marketing working with Artificial Intelligence.

The studied phenomena are not evaluated by numbers in this study, the main goal of this study is to analyse the collected data from the interviews and other sources to gain the view of the subject from their perspective, and to gain knowledge from professionals in the field of digital marketing, which is why a qualitative approach has been chosen for use. The method used for analysing was thematic content analysis as it was the most suitable for the type of content gathered from the interviews.

3.1.2 Data analysis

Thematic content analysis, by definition, is a popular method for analysing qualitative data in many disciplines and fields, and can be applied in lots of different ways, to lots of different datasets, to address different research questions!

It is one of a cluster of methods that focus on identifying patterned meaning across a dataset. (Braun, Virginia; Clarke, Victoria, 2019)

3.2 Setting and Data Collection

Interviews with the experts were conducted in a calm and relaxed location without the disturbance of outer factors. Reserving enough time to get thoroughly answered questions.

An interview is a consultation to either evaluate knowledge or qualifications between two people or more. Interviews can be divided into three different levels unstructured, semi-structured and structured: In a unstructured interview there is not a prepared set of questions or a formal structure to follow.

Interviews that have been conducted with a semi-structure define as having a list of topics and some main questions that premade but can be changed up during the interview depending on the situation. Structured interviews have been prepared with a certain set of questions that should be followed point by point (Saunders et al. 2009). In this study, the semi-structure method was used,

and answers were open-ended. Six different interview questions have been created to best answer the research questions, these can be found in the appendices.

The authors' responsibility in this was to stay unbiased towards the opinions of the participants and act as an instrument to generate the needed data to conduct the analysis of the data. Tasks included recording the interviews, taking notes, and transcribing.

If the participants had a hard time evaluating the question the author followed up with a more specific matter related to the specific participant. If the participants had a hard time explaining their findings and views in the language of the research (English) the answers were taken in Finnish or Swedish and later translated by the author to English for the purpose of the study. All the participants had worked, or work related to the field of Digital Marketing related to Artificial Intelligence. Finally, the answers were consolidated into a database.

3.2.3 Transcribing

The name of the interviewer, interviewee, time, date, and location were written down. Listening to one question at a time and writing it down. The participant's titles, daily tasks and operations, and company names they used or work at currently were also written down. As some participant wanted to stay anonymous the author decided to make everyone just that to help with clarity around the text.

If some of the follow up questions did not clearly reflect on the particular subject matter the author had the ability to remove that specific question with answers if he felt the need to do so. This would make the transcribing and analysing more coherent for the author and would help him optimize the process.

Following this pattern transcribing every word until the end and read it through afterwards. Checking grammar, editing excessive use of, you know, um, uh. Correcting the spelling and adjusting the wording without changing the meaning of the sentence therefore creating a more sophisticated result.

4. Interview results

Results structure is composed of three different parts, research questions stated, a brief explanation of the distinct themes that were composed through the data, and a separate part for each theme with reporting of findings.

The research questions (RQ) are:

RQ 1. What is the impact of Artificial Intelligence in Digital Marketing today?

RQ 2. What will the future look like with AI in Digital Marketing?

The results were divided in six distinct themes that were analysed with the research questions above. Themes like automation, optimization & efficiency have been divided into separate groups so the reader can gain a better understanding of the specific improvement or changes AI might bring into digital marketing. The author felt that it would create a stronger impact with the ability to gain more knowledge with specified terms instead of having one big broad theme.

1. **Automation of tasks** in digital marketing, tasks, and projects, repetitive, or time consuming
2. **Optimization of tasks** in digital marketing related tasks and projects, increasing the profits and improving the already set base from manual work.
3. **Efficiency & Improvements,** different forms of improvements and efficient traits that came along with AI.
4. **Utilization of AI,** ease of use, and several ways of using the software & more.
5. **Future of tools & privacy,** the future of AI around tools & privacy related matters in Marketing.
6. **Uncertainty of AI,** possible downsides and negatives following the implementation or use of AI.

Themes 1, 2, 3, and 4 answered the first research question. Theme 5 and 6 answered the second research question.

The participants in the interviews have been named as participants from 1-5 for an easier understanding of the citations and will be explained next.

Participant 1: Male, working in a brand agency as a Marketeer, previously worked in an advertising agency. Specialized around analytics marketing & e-commerce, social media growth.

Participant 2: Female, working in a company making use of AI in the medical field, responsible for Marketing & Operations. Managing everything related to marketing from strategic planning to implementation.

Participant 3: Female, working in the telecommunication industry as a marketing-automation Manager. Taking over operational marketing activities, basically on the CRM side, cross-selling, up-selling, onboarding, etc.

Participant 4: Male, working in the construction industry as a marketing Manager. Taking care of the marketing operations, producing content, taking care of the software, Marketing automation, Google ads, Google analytics.

Participant 5: Male, working in the insurance industry as Head of Digital Marketing & Online Analytics. Run the digital marketing, with two types of tasks, campaigns & brand-oriented goals and performance marketing that is ongoing.

Theme 1: Automation of tasks

Automation was a theme that came up with every single participant in the interviews. When discussed the different benefits from tools that use AI has provided, Automation was one of the most frequently mentioned things. It included features like automated biddings, almost completely automating the repetitive tasks and providing insights for you to work with and improve the current state of various marketing campaigns etc. It was used for going through big data sets that could have taken longer with manual work. Features that came up several times in the interviews were the ability to ensure repetition and continuous optimization in the background so when the manual labour would go home for the day the machine would continue to work in silence. It also could suggest you with different methods of finishing a task. Provided automatic optimization as well as a more coherent online-based audience and target groups.

Participant 3 stated the following:

I think the benefits include automatic optimization, for example, that we can send our campaigns to individual customers at the time they are most likely to open and engage with it. It also increases our efficiency in both workforce and cost wise. We can automate our content building for example in the product recommendation we do not have to check every single product manually and tell their price and other stats. Once we have implemented the product the AI will automatically choose what the customer is most likely interested in according to its logic.

Participant 5 stated the following:

Through constant A&B testing and trying out the automation tools, the situation is now that it is a very big part of SEO that is done completely by machines or with little manual help. As I mentioned previously that we input the creatives in an ad, for example, write multiple different headlines and then the machine puts them together in the best possible combination and gets us better results in that way. We and the ML are working together.

Manual labour had been pushed aside as several participants stated that many various tasks were done almost completely automatically by the machine. Approaches also varied depending on what kind of software and system participants were using. One participant might have had more sophisticated software in use with a more mature AI compared to another participant and this made it harder to directly compare the level of automation.

Theme 2: Optimization of tasks

The data around optimization had several key factors that were talked about in several of the interviews. Some of the subjects being how AI can help achieve more consistent and better results. It had been used to achieve more optimized target groups and improving sales and profit for several companies. Common ground with the participants was that humans can do the same things the AI can, but it might be substantially slower and less efficient than what the machine would be capable of off.

Participant 1 stated the following:

Three points that come immediately to mind are scale speed and efficiency in the play. We can ask from the software for example when my user numbers were peaking on my website and that is coming through very sophisticated data analytics. Other things in digital marketing as I

mentioned are based on numbers. These can be more efficiently optimized through AI instead of a human whether these are all a good thing that I am not sure about.

Speed, scale, and efficiency were the core words used when participants mentioned the layers of efficiency. All off the participants agreed on previously mentioned layers and felt like it is kind of self-explanatory to many of them. However, the author felt the need to clarify if these were factors that had been efficient previously and that they had gotten better through the machine's work which seemed to be the case.

Participant 4 stated:

Of course, it reduces manual labour and manual manpower you need to put in to optimize the campaigns, so it is done automatically and continuously. So, it is based on quite simple rules and calculations in the end that before I would have done and tried optimizing myself. Now it does it in a more intelligent way and all the time. Compared to every two weeks or once per week that it used to be done manually.

As participant 4 states, normally he would have done the optimizing himself but now the machine was able to do it for him which saved him time and created even more intelligent features. The tasks were able to be completed more often than manually as well.

Participant 5 also said:

The first feature that we used was product suggestions that it gave automatically. Now it has come a long way and has many more features, from visiting insights to AI based content selection, so AI chooses what the consumers are more likely to react to.

ML was discussed throughout participant 5's interview and this was something he was familiar within his work. As the AI was able to learn the behavioural patterns of consumers to be able to better suggest products therefore improving the profits by making more sales.

Theme 3: Efficiency & Improvements

The key subject that was observed around efficiency was the ability to save time. This came up in several interviews when participants mentioned the reduced manual labour as well as the ability for the software to do certain tasks at an almost impossible efficiency level compared to humans. It did this in several ways, in increasing the speed of how fast the task was completed, the AI was

also able to create faster scaling based on data therefore saving valuable time and making more money timewise.

Participant 5 mentioned the following words in the interview:

We also let Google go into new search queries, new search words that are automatically trying to expand the actual keywords we are using. It seems like people are starting to type longer and longer sentences when searching for something and there are constant new keywords. It is almost impossible to do it by yourself, figure out all the keywords that are relevant and keep it updated constantly.

This seemed to be particularly interesting because of the ability of the machine to instantly adapt to a new trend that was observed by the participant. As stated by the participant it would be almost impossible to do it by yourself.

Participant 3 stated the following paragraph around efficiency:

It also increases our efficiency in both workforce and cost wise. We can automate our content building for example in the product recommendation we do not have to check every single product manually and tell their price and other stats. Once we have implemented the product the AI will automatically choose what the customer is most likely interested in according to its logic.

There was a pattern of increased efficiency around the workforce as well as cost wise. This was naturally tide to automation. All in all, participants agreed that it created a structured package with several layers of benefits with some that were visible immediately and some in the long-term. Participants did not mention any negative side with the improved efficiency, except for one participant wondering about the lack of some ethics around the topic.

Participant 2 stated:

In general, Grammarly makes stuff happen faster. Grammarly is a software that reads the content you have written whether it is email, texts, or let us say for example on drive or WordPress and corrects your grammar and might suggest some ways to make it even more professional. So, you do not need to manually check it, but you trust the software to automatically correct it, so you get it done faster.

The participant above used a specific spell correction tool that has also been used in this study several times to improve the language and phrases in the paragraphs." Grammarly uses artificial

intelligence techniques like machine learning, deep learning, and natural language processing to improve your writing" (Grammarly,2019).

Theme 4: Utilization of AI & Change

In this section, the discussion revolved around the fundamental change of digital marketing when you enable the AI to cover more and more of the tasks at hand. Participants certainly agreed upon the fact that humans should still have the final decision while the AI takes care of the repetitive tasks. Different kinds of tasks had been manual from before that were now automatized through AI. One participant stated that AI creates a more intelligent way of working and minimizes the overall control you have over the broad data and increase the control within the specified details for the result. Several participants argued of the fundamental changes to how Digital Marketeers are going to work in the future, this because the repetitive tasks are going to be done by the machine and the level will increase with time creating more sophisticated software therefore changing the daily tasks of a marketeer to a different but not non-existent form.

Participant 1 mentioned this in the interview:

Anything in digital marketing, Facebook, Tik Tok, and Google uses artificial intelligence, and whenever you want to Target a specific person based on his or her interest, working or demographic information you rely on artificial intelligence to find that person for the lowest price.

AI is in countless software, constantly in use without many of the consumers even knowing about it, this is specifically highlighted in digital marketing as the data is of great value in the eyes of a marketeer and company.

Participant 4 stated:

But one way we are using Artificial Intelligence is that we integrated the marketing automation system with our CRM and in the marketing automation part we have a lead scoring system. So basically, let us say person X has opened our link in our website and has opened our email campaign and for example has clicked on three different links throughout our email campaigns. For everything they do they will get points and every contact that we have if it is not our customer, they are marketing qualified leads, and when they exceed 100 points the CRM determines that they are sales qualified leads. Usually, Sales Qualified leads are determined by salesmen. Usually there is no automation doing that. Because we have low resources and we wanted to make it more

efficient and for that we have these parameters, if the contact has done several of the activities the Artificial Intelligence will recognize that they are Sales qualified leads. And that is what we implemented, this week which is a scoring system.

Participant 4 mentions that even for a smaller company that might lack the resources for a bigger investment, they are able to gain the benefit of AI by outsourcing some of the tasks to the machine and therefore creating more time for humans to focus on the creative task.

Theme 5: Future of tools & Privacy

Future based discussions were conducted around these topics, things that participants mentioned were the ability for humans to fully trust AI to make the correct or even the right decision. Many of the participants mentioned that Finland specifically has strict laws around privacy and there are also possibilities of causing legal trouble if something the AI has done has gone wrong. When people losing their jobs was brought up several participants argued that the change is for the good and AI will create more jobs simultaneously as the old one's stop being. AI is also heavily relied on and some thought that this could cause issues in the future. All and all the participants said that the future of AI, in general, is looking bright specifically on the digital marketing side where it has a lot of potentials to grow even bigger than it is.

Participant 4 stated the following:

Well, I think the service providers of AI will support the content even more, with more automation, and even creating the templates by the machine. It will provide more efficient use with the data and the customer journeys and I think the marketeers will have more insights based on that. But at the same time, privacy policies are moving towards a stricter environment. As an example, previously you could determine your campaign on political aspects. So those kinds of private individual information like being a female or male, these kinds of parameters are moving away, and it is going to be strictly based on the behaviour. I think the behaviour, assumptions, data will get more precise. This will help everybody do more efficient marketing. I have seen the rise of marketing automation throughout the years, it started from email marketing, just to send emails. After that it has developed into much more like leading scores, making forms, integrating the CRM etc. Service providers are offering more complete software. Everything being under the same software I think is the future.

As participant 4 stated the future might look very different from what it is currently. Consumer behaviour might see an increase in impact ones we move more into the future with software. Another very frequently presented subject by the participants regarding the future of AI was that many seem to believe there will be a master tool for everything around digital marketing, so you will not be needing several different ones to manage your day to day, tasks.

Theme 6: Uncertainty of AI

Participants argued that in most the cases AI would be smarter than a human, because of the efficiency and optimization it provides. However, from experience one of the participants had lost money in the early stages of implementing AI because they also needed to learn how to use it first. It was also stated that it requires some manual work to get it setup but once it is done it will be paying itself back however this statement was mostly tide to only one participant. The topic of uncertainty came up with several participants as they argued if AI can always be fully trusted if they are using an automated bidder that is provided by Google themself, so using Google's own AI bidder to use the company's money. In the eyes of the consumer, AI was not able to create the most personal content compared to the human. Some had their AI doing a big part of the tasks and sometimes it frightened them that if something went wrong it could cause an uproar, naturally, this was something a human could have also failed at, so the argument was based on who is the one to take the blame if it is the machines doing.

Participant 4 stated the following:

If you are not controlling the automations efficiently it might be that somebody, customer A can get some content that was meant for customer B. I think that these need to be monitored frequently and the content they are sending needs to be updated frequently. It is not like you, create everything once and you do not need to do them ever again, so there are lots of manual tasks even if you can automate a lot of things. But the more focus, the more manual focus you put on the more results and better content you will get. I can translate my reference story in English by Google translate but the English are bad. So sometimes you cannot trust the AI. Artificial Intelligence is usually just doing the tasks that you are telling them to do, and they cannot modify it necessarily. Trusting the AI too much I think is one of the risks. The main benefit is when you save time, the creativity side is not smart enough yet.

Participant 4 mentions that even if tasks are getting more automated the best results are still achieved by carefully monitoring and optimizing the manual work that is required for the automations to work consistently. He also mentions that the AI's creativity side is not on the level yet that it is able to perform professional material by itself. He also brings up the consistent talk of being able to trust the AI fully.

Participant 1 stated:

Firstly, I would say that we are very over reliant on data and sophisticated algorithms.
and if you go into the ethics I think that's another discussion as a whole but I think the related issue is that it is too big of a black box for normal people that are not into a set of rules of artificial intelligence are still having to make a lot of decisions that are based on a real AI so I don't know if I was elaborate enough but there too many things that the wide audience doesn't understand and are still affected with.

Participant 1 mentions an intriguing point related to normal people not necessarily being aware of the complexity of AI. He also feels that we are very over reliant on data. Several apps in the day-to-day life of normal people consist of AI managing their data and this is unknown for a big portion of the population.

5. Conclusion

Conclusion includes the specified results of conducting interviews with the industry experts that created a view of the impact of AI on digital marketing. It will also include an elaboration of what could have been done differently in a future study and which parts one should consider moving forward. The future of AI will be discussed with the fact that technology is constantly changing, and the answers are opinions that vary depending on the field and study.

5.2 Answers to the research questions

Provided in the following statements are the answers for the research questions.

RQ 1. What is the impact of Artificial Intelligence in Digital Marketing today?

The impact can be greatly seen in many different parts of the digital marketing industry, clearly it is not only one sided but includes various factors. The key findings would be the increased automation that helps Marketeers perform on a greater level, it does not only help with automating the repetitive tasks, but it can also make the work somewhat more enjoyable because one is able to focus on the more creative and narrative driven tasks that do not require to do the same thing repeatedly. Repetition is often considered to be a good investment in terms of learning to various tasks but considering that we are moving towards a more machine sustained world this might be something we need to leave in the past. Automation offers plenty, it can improve the actual work going on and does not need to sleep between work shifts as humans do. This might sound scary to some, but many participants stated that they do not believe that automations will take over the job marketeers do it will just change the way they work. Therefore, it will require a more open-minded approach towards marketing in general and employees will need to sustain a new kind of attitude towards digital marketing because it is changing at a rapid pace.

Furthermore, optimization has been greatly improved as it can spot even the tiniest little changes to data and it can do precise work without human errors. Naturally, there is always the debate about who takes the blame with machine errors because undoubtedly, they will happen but to what extent that is unknown. Several participants mentioned that they had seen improved profits throughout the process of using AI for optimization, firstly by saving time and therefore money. The machine was able to get more precise data than a human could, which would seem self-explanatory at this point because of the continuous optimization. It helped with providing the consumer with more relevant ads with the use of data. One major factor was also being able to optimize campaigns with the help of humans. Efficiency was also improved with the introduction of AI into digital marketing. This helped save time, humans were not capable of doing the same level of work with the same efficiency. Suggestions towards customers improved because of the ability to be more constant. Some other benefits included faster scaling based on data and insights provided.

What were some of the utilization factors the study took into consideration? AI will eventually gain a bigger portion of the job if it has not done it already. This did create some thoughts with the participants. Humans will still have the final decision for now. Something that was highlighted was the thought of having a master tool that contains all the benefits and different features you could use in digital marketing, and this also seems to be the way several companies are taking it. To start with the AI might have encountered some issues but when the ML has been doing its job for a while it took the advantage over humans.

Something that the AI still lacks is creativity and this seemed to be a common opinion around the experts. We might see something being done on the creative side in the future but for now humans are still needed regarding it. The AI can suggest the products better and it can also predict various matters better than a human can right now. This is something that I personally think companies should really invest their time on if they have use for these features.

RQ 2. What will the future look like with AI in Digital Marketing?

Two topics were the focus regarding this research questions, future of privacy and tools and the uncertainty of AI. Some factors to consider before implementing AI into your company can be the fact that it might take some time to get used to it and learn the ways to use it. It can require several years of proof testing depending on what kind of software you are using and in what way. One should be ready to have some extra resources to spend towards a common goal of automation. It will not completely remove the manual labour, and it was believed that manual work will still be needed in the future as well just in a different form. In the future consumers cannot necessarily distinguish humans work from AI, whether this is a good or a bad thing no one knows. And as previously mentioned AI still struggles to make things personal, and humans personal touch will still be needed for now.

Can you fully trust the AI to make the decisions for you? Simply put I would argue that you can, but does it change when the company providing the platform is the same company providing the actual AI and making the decision for you? It might. This is something that was discussed with a participant and it might be hard to get a factual answer. Finland has some of stricter laws around AI which could end up being a negative thing in the future regarding the development. But at the same time, it might also be a good thing if we want to properly regulate the industry and tech around AI. Other factors that came up when discussing the future is the consequences after the mistakes of AI, especially if you are a big company, it can ruin the reputation if the AI makes a crucial error and might even lead to legal consequences.

Risk of leeks is also present when we start using more and more data of individuals, this part can be more directed towards ethics and was not deeply discussed. Something that was seen as a future path was the ability for a website to be personalized for one person specifically and this might even occur faster than we know. AI will also create new jobs as it will require maintenance and various support roles around it. Some argued that will we be over-reliant on the AI at some point and what

we will we do if something goes wrong, time will only tell. However, several participants thought that the future of AI looks bright, and it will see further increase growth in the forthcoming years.

5.1.1 Reliability & Validity of results

As mentioned in the introduction the limitations include that most of the answers are based on experiences had by the interviewees. This can create a scattered end results depending on the opinions of several people. When analysing the results, one should have in mind that these are based on opinions especially the questions regarding the future. The results would vary depending on the industry and knowledge around AI. Some of the participants showcased a more in-depth knowledge of the technology and features it can provide in digital marketing with resulted in varied opinions regarding the future and their own use case. However, I would argue that the answers provided are still valid on a broader level which helps companies, especially the ones that are not familiar with the technology at all, take a step and start implementing software with the capabilities of creating the same impact that the participants have witnessed in their work. Digital marketing is global and is generally done in all companies nowadays, referring to this one could argue that even if the results vary depending on the person and industry they are still factors that impact companies on a whole.

5.1.2 Further research

With future research in mind, interviews could be conducted within a specific industry to get a more niche overview of the specific benefits and usage cases. There was a slight limitation with time so there could be a possibility to enhance the data with longer interviews and several follow-up questions regarding the future of AI. The research went broadly through AI and digital marketing but in the future one could assume that the basics are covered and could go more in-depth into the specific about the current most used features. Some of the interview participants were young professionals and the study could benefit from interviewing people that have worked a longer time in the field with AI. The biggest expected finding was automation, this is however a broad topic and could be specified in what possibilities there is around different automations other than the ones discussed in the study.

Källor / References

Accenture Interactive, 2016, Chatbots in Customer Service, Available from
https://www.accenture.com/t00010101T000000__w__/br-pt/_acnmedia/PDF45/Accenture-Chatbots-Customer-Service.pdf (Accessed 5.12.2019)

Accenture Mobility, 2017, Embracing the Disruptive Power of Chatbots, Available from

https://www.accenture.com/t20170503T135801Z__w__/cr-en/_acnmedia/PDF47/Accenture-At-Your-Service-Embracing-Chatbots.pdf#zoom=50 (Accessed 5.12.2019)

Akerkar, R., 2019. *Artificial Intelligence for Business*, Cham: Springer.

Alpaydin, E., 2016. *Machine learning: the new AI*, Cambridge (Massachusetts): MIT Press.

Anh, T., 1970. Theseus: Artificial intelligence in e-commerce : Case Amazon. *The URN resolver of The National Library of Finland*. Available at: http://urn.fi/URN:NBN:fi:amk-2019060314428 [Accessed May 6, 2021].

Arasu, B.S., Seelan, B.J.B. & Thamaraiselvan, N., 2020. A machine learning-based approach to enhancing social media marketing. *Computers & Electrical Engineering*. Available at: https://www.sciencedirect.com/science/article/pii/S0045790620305784 [Accessed May 5, 2021].

Braun, Virginia; Clarke, Victoria (2019). "Thematic analysis". *Handbook of Research Methods in Health Social Sciences*. Hoboken, New Jersey: Springer: 843–860

Chaffey, D. & Ellis-Chadwick, F. 2019. Digital marketing. Seventh edition. Pearson.

Harlow.

Cremer, S. & Loebbecke, C., 2019. Artificial Intelligence Imagery Analysis Fostering Big Data Analytics. *MDPI*. Available at: https://www.mdpi.com/1999-5903/11/8/178 [Accessed May 5, 2021].

"Don't Discount Email Marketing", 2019, *Journal of Financial Planning,* vol. 32, no. 7, pp. 14.

Dumitriu, D. & Popescu, M.A.-M., 2020. Artificial Intelligence Solutions for Digital Marketing. *Procedia Manufacturing*, 46, pp.630–636.

Goodfellow, I., Bengio, Y. & Courville, A. 2016. Deep Learning. MIT Press. Cambridge

Greenwald, T. 2018, *Artificial Intelligence (A Special Report) --- What Exactly Is Artificial Intelligence, Anyway? Everybody's talking about AI these days. Here's what all the fuss is about*, Eastern edition edn, New York, N.Y.

Shankar, V., 2018. How Artificial Intelligence (AI) is Reshaping Retailing. *Journal of Retailing*, 94(4), pp.vi-xi.

Huang, J. & Depari, G.S. 2019, "Paid Advertisement on Facebook: An Evaluation Using a Data Mining Approach", *Review of Integrative Business and Economics Research,* vol. 8, no. 4, pp. 1.

Jarek, K. & Mazurek, G. 2019, "Marketing and Artificial Intelligence", *Central European Business Review,* vol. 8, no. 2, pp. 46-55.

Katsov, I. 2018. Introduction to Algorithmic Marketing: Artificial Intelligence for Marketing Operations.URL:https://algorithmicweb.files.wordpress.com/2018/07/algorithmicmarketing-ai-for-marketing-operations-r1-7g.pdf. (Accessed 1.12.2019)

Lukosius, V. & Hyman, M.R. 2019, "MARKETING THEORY AND BIG DATA", *The Journal of Developing Areas,* vol. 53, no. 4, pp. 217-228.

McCarthy, J., 1998. [PDF] WHAT IS ARTIFICIAL INTELLIGENCE: Semantic Scholar. *undefined*. Available at: https://www.semanticscholar.org/paper/WHAT-IS-ARTIFICIAL-INTELLIGENCE-McCarthy/be67fbc3db47fdaa118fd6816b21968fb1cf547e (Accessed: 1.12.2019)

Mozeryte, G., 1970. Theseus: The Silent Giant of Marketing: How Artificial Intelligence is Revolutionising Digital Marketing. *The URN resolver of The National Library of Finland*. Available at: http://urn.fi/URN:NBN:fi:amk-2019052812728 [Accessed May 6, 2021].

Paradiso, C., C.P.I.A. 2016, "THE IMPACT OF ARTIFICIAL INTELLIGENCE ON DIGITAL MARKETING", *Rough Notes,* vol. 159, no. 10, pp. 16-17.

Rampton, J. 2016, Jun 04-last update*, Artificial intelligence is changing SEO faster than you think* [Homepage of AOL Inc], [Online].

Ryan, D. 2017. Understanding Digital Marketing: Marketing strategies for engaging the digital generation. Fourth edition. Kogan Page Limited. London.

SAS Institute Inc. (2019). Big Data: What it is and why it matters. URL: https://www.sas.com/en_us/insights/big-data/what-is-big-data.html. (Accessed: 1.12.2019)

Saunders, M., Lewis, P., Thornhill, A., 2009, Research Methods for Business Students, 5 th edition, Harlow: Pearson Education Limited, New York

Sponder, M. & Khan, G.F., 2018. *Digital analytics for marketing*, New York, NY: Routledge.

Statista 2019. Marketing related use of AI worldwide 2018, by region. URL: https://wwwstatista-com.ezproxy.haaga-helia.fi/statistics/915372/marketing-related-use-artificialintelligence-world/. (Accessed 1.12 2019)

Sterne, J. 2017. Artificial intelligence for marketing: Practical applications. John Wiley &

Sons. Hoboken.

Stone, M., Aravopoulou, E., Gerardi, G., Todeva, E., Weinzierl, L., Laughlin, P. & Stott, R. 2017, "How platforms are transforming customer information management", *The Bottom Line,* vol. 30, no. 3, pp. 216-235.

SAS Institute Inc 2019, https://www.sas.com/en_us/insights/analytics/what-is-artificial-intelligence.html (Accessed 31.10.2019)

Anon. 2019. The Future in Social Content Creation Is Artificial Intelligence: PreB. *PRWeb*. Available at: https://www.prweb.com/releases/the_future_in_social_content_creation_is_artificial_intelligence_prebuilt_marketing_ai_is_taking_the_lead/prweb16430755.htm [Accessed May 5, 2021].

Anon, 2019. How We Use AI to Enhance Your Writing: Grammarly Spotlight. *Grammarly Spotlight: How We Use AI to Enhance Your Writing*. Available at: https://www.grammarly.com/blog/how-grammarly-uses-ai/#:~:text=Actually%2C%20if%20you%20thought%20%E2%80%9Crobots,processing%20to%20improve%20your%20writing. [Accessed May 5, 2021].

Ma, L. & Sun, B., 2020. Machine learning and AI in marketing – Connecting computing power to human insights. *International Journal of Research in Marketing*. Available at:

https://www.sciencedirect.com/science/article/abs/pii/S0167811620300410 [Accessed May 5, 2021].

Spangenberg, R., 2018. 15 Applications of Artificial Intelligence in Marketing. *Home*. Available at: https://digitaldirectorship.com/15-applications-artificial-intelligence-marketing/ [Accessed May 5, 2021].

Bilagor / Appendices

Interview questions

1. *Please describe the type of Artificial Intelligence you have used or taken part in. What was your role?*

2. *What are the expected key benefits of using Artificial Intelligence in Digital Marketing?*

3. *Which kind of software or implementation are you currently using in your work that involves Artificial Intelligence and why?*

4. *What are the main risks of using Artificial Intelligence in Digital Marketing?*

5. *What would you consider being the main challenges currently in using Artificial Intelligence?*

6. *What do you think the future looks like regarding Artificial Intelligence in the field of Digital Marketing?*