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## **AI in Digital Marketing**

Thesis  
Autumn 2023  
Bachelor of Business Administration



SEINÄJOKI UNIVERSITY OF APPLIED SCIENCES

Degree Programme: International Business

Specialisation: Digital Marketing and Artificial intelligence

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Title of thesis: AI in Digital Marketing

Supervisor: Koski Mia

Year: 2023

Number of pages: 58

Number of appendices: 1

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## **Thesis abstract**

This thesis investigates the profound influence of artificial intelligence (AI) on digital marketing, employing a rigorous methodology that involves surveying two distinct groups: social media users and random professionals. The primary objective is to assess the participants' awareness and familiarity with AI in digital marketing, revealing a widespread acknowledgment of its importance. The study uncovers varied perceptions of AI understanding among the participants, with some expressing high comprehension and others reporting a limited understanding. Emphasizing the potential of AI to enhance digital marketing strategies, the study delves into the specifics of personalization, with the participants highlighting the effectiveness of ChatGPT in communication, content creation, and customer engagement.

Concerns related to AI implementation, particularly privacy and job displacement, emerge as prominent themes in the participants' responses. Privacy-related apprehensions center around the assembly, processing, and utilization of individual data in AI-driven marketing. Despite these concerns, consumer attitudes towards AI-driven personalization in marketing campaigns are overwhelmingly positive, evident in participants consistently expressing willingness to engage with brands employing AI-driven personalization.

Data from digital marketing professionals contribute valuable insights, highlighting prevalent roles (Marketing Manager, SEO Analyst, and Digital Marketing Specialist) and indicating a common range of 3–5 years of experience in the field. The thesis concludes by exploring challenges faced by organizations in adopting AI for digital marketing, outlining perceived benefits, and anticipating the impact of AI in specific digital marketing areas. Nuanced discussions on diverse AI tool combinations and varying expectations regarding AI's future role underscore the complexity of the industry's trajectory.

1 Keywords: Artificial Intelligence, Digital Marketing, AI Adoption, AI Tool Combinations

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# 1 Introduction

The convergence of technology and marketing strategy within the realm of digital marketing stands out as a pivotal determinant of success. Artificial Intelligence (AI), given its capability to replicate human cognitive processes, reshaping the digital marketing landscape. This research rigorously explores the diverse applications of AI for Digital Marketing, drawing on established literature, empirical studies, and industry best practices to illuminate its profound impact and strategic implications.

In a study conducted by Priyanga in 2023, it was found that Artificial Intelligence (AI) has become an indispensable tool for augmenting digital marketing efforts. AI empowers marketers to enhance product development, deliver swifter and more targeted advertising, and gain deeper insights into audience data patterns. Businesses leverage including social media and email advertising. This technology facilitates a comprehensive understanding of audience interactions, enabling marketers to devise the most effective messaging strategies.

Research by Bashang and Puttanna (2023) emphasizes the escalating importance of AI-driven conversational interfaces in elevating customer engagement. These virtual entities, by analyzing user queries and preferences, provide real-time assistance, contributing to a seamless and responsive customer journey. This thesis will scrutinize the practical implementations of such technologies, shedding light on their impact on customer satisfaction and loyalty. Leveraging insights from research by Bansal et al., (2022), it explores how AI-powered tools decipher patterns in consumer interactions and anticipate future behaviors.

To contextualize the discussion, prominent case studies, such as the successful deployment of AI in e-commerce platforms like Amazon and personalized recommendation engines used by streaming services like Netflix (Hou et al., 2021; Zeng et al., 2022), will be examined. These cases serve as exemplars of AI's transformative potential, illustrating how data-driven insights derived from AI algorithms can bolster marketing effectiveness and shape personalized customer experiences.

Over the last two decades, the field of marketing, along with sectors like finance, healthcare, engineering, and education, has experienced substantial transformations driven by the impact of AI (Huang & Rust, 2018; Rust, 2020). This impact results from the increasing personalization of interactions between consumers and businesses.

However, as AI becomes increasingly ingrained in the fabric of digital marketing, ethical considerations and challenges emerge. Drawing on the work of DG (2020), this research will critically assess the ethical implications associated with AI, addressing concerns related to privacy, bias, and transparency. By scrutinizing both the promises and perils of AI integration, this research aims to provide a nuanced understanding of the ethical dimensions that warrant careful consideration in the pursuit of effective and responsible AI-driven marketing strategies.

This research endeavors to contribute to academic discussion surrounding artificial intelligence's incorporation into digital marketing. By synthesizing existing knowledge, analyzing real-world cases, and addressing ethical considerations, this research seeks to equip businesses with actionable insights to navigate the evolving digital landscape strategically.

### **1.1 Background information of the research**

This chapter delineates the characteristics of artificial intelligence (AI) and its application in the field of marketing. According to Hussain et al.'s (2022) definition, we denote computerized systems that utilize data to execute tasks resembling those performed by intelligent entities' Weak AI, commonly known as narrow AI, focused on specific tasks, like its application in autonomous vehicles. On the other hand, strong AI, suggests a machine possessing consciousness and intelligence that spans across various domains. There is also speculation regarding the concept of Artificial Super Intelligence, suggesting the theoretical possibility of computers surpassing human capabilities.

Over time, technological advancements have profoundly influenced our world, with AI seamlessly integrating into daily life through innovations like chatbots, smart devices, and self-driving cars. These developments aim to understand and cater to customer preferences, delivering unique consumer experiences. In essence, AI embodies the intelligence displayed by machines. The significance of AI has been an enduring topic of discussion and is now pervasive in various sectors, including marketing. The implementation of automated marketing strategies not only enhances personalized customer experiences but also contributes to time and cost efficiency.

Rosenberg (2018), referencing insights from the Constellation study, anticipates a substantial increase in AI investment across diverse sectors, projecting an annual investment exceeding 100 billion euros in 2025 compared to a mere 2 billion euros in 2015. This surge in investment



is expected to extend to the marketing industry, aligning with McKinsey & Company's analysis by Chui et al. (2018).

Sectors emphasizing a consumer-centric approach, like retail and high tech, show a notable inclination towards utilizing AI in marketing and sales. This preference is driven by the frequent digital engagements between businesses and consumers, generating extensive datasets conducive to AI applications. E-commerce platforms, in particular, have a significant advantage as they can easily gather customer information. This information enables them to dynamically tailor promotions, pricing, and product offerings in real-time. The study emphasizes the significant potential for considerable sales growth through the daily utilization of customer data for personalized promotions. Artificial intelligence (AI) has become widely integrated into digital marketing like pay-per-click ads, website personalization, content creation, and predicting user behavior. In 2018, 84% of organizations either adopted or increased their utilization of AI and machine learning, indicating a growing awareness among marketers of the benefits offered by this technology. AI's application can be split in two areas: backend tasks such as forecasting product demand, creating customer profiles, and programmatic ad buying, and front-facing tasks like enhancing the customer experience for improved brand visibility and increased sales. According to 75% of companies, incorporating machine learning and AI results in a customer satisfaction increase of over 10%. Artificial intelligence surpassing human capabilities in recognizing patterns and predicting market trends. Marketers and brands are increasingly turning to machine learning and AI to efficiently analyze large data sets, revealing patterns that may go unnoticed by humans. This shift enables companies to make informed, data-driven decisions, leading to improved.

## **1.2 Problem description**

Artificial Intelligence (AI) being included into digital marketing presents modern businesses with a dual prospect – a transformative opportunity and a challenge. The potential advantages are clear, encompassing improved efficiency, personalized customer experiences, and decision-making based on data. The gap between the rapid advancements in AI technology and its practical implementation in the digital marketing domain raises critical questions about the alignment of academic research with industry practices. This research goal to identify this disparity by looking into the current state of AI in digital marketing, analyzing the key challenges faced by businesses in harnessing its potential, and proposing strategic frameworks for the

effective integration of AI to propel digital marketing practices into a new era of innovation and efficiency. According to a study conducted by Wedel and Kannan in 2016, it is asserted that modern marketing managers are increasingly tasked with acquiring expertise in both analysis and the technical aspects of artificial intelligence (AI) implementation. The implication is that marketers who possess a total understanding of AI infrastructures and its practical applications within marketing tools are more likely to pursue successful campaigns. This advantage stems from their familiarity with the technical limitations of AI. The research highlights instances where marketers' expectations may not align with the actual capabilities of AI. As the need for proficiency in both marketing and AI continues to grow, the study emphasizes the interconnectedness of these two disciplines in the successful execution of marketing campaigns.

### **1.3 Aim of the study**

The aims of the study is to investigate the role of AI in digital marketing, seeking to add insights to existing theories on the subject and understand its operational mechanisms within the digital marketing landscape. The objective is to scrutinize the impact and applications of artificial intelligence in digital marketing, assessing its utilization and examining how organizations employ it to enhance their overall performance. The main objective of the study is to find out and discuss the AI in digital marketing. The specific objectives of this study are as follows:

1. To perform a thorough review of the current application of Artificial Intelligence in marketing strategies across various people.
2. To investigate and evaluate the impact of AI on the overall execution of digital marketing initiatives.

### **1.4 Research inquiries**

This study seeks to explore the current phenomenon of artificial intelligence and analytics and their improvements within the marketing. The research investigates the intricate landscape of artificial intelligence (AI) within the realm of digital marketing. A key focus of inquiry centres on comprehending the subtle ways in which the integration of AI impacts consumer behaviour and engagement. Consequently, the research seeks to address the question of how AI-driven strat-

egies can be identified and implemented to optimize marketing initiatives for enhanced effectiveness and efficiency. By exploring the symbiotic relationship between AI and consumer interactions, the study aims to uncover insights that go beyond mere automation, delving into the transformative potential of AI in tailoring marketing approaches to individual preferences and trends. This research question underscores the need to not only comprehend the impact of AI but also to strategize and harness its capabilities for more targeted and personalized digital marketing campaigns. Research is done to know how the aligned views of AI experts on the structured nature of AI systems and the emphasis on marketers' awareness of technology's limitations compare with the perceptions of random personnel, and what implications do these insights have for achieving effective integration of artificial intelligence in digital marketing strategies.

### **1.5 Scope of the study**

The scope of this thesis encompasses an in-depth examination of artificial intelligence's intersection with digital marketing, emphasizing machine learning, big data, and future trends. Through the provision of thorough and extensive results, the authors aim to motivate fellow marketing professionals to explore more profoundly the swiftly advancing domain of digital marketing. The significance of this thesis lies not only in its contribution to existing knowledge but also in its potential to empower marketing practitioners with practical insights.

The authors anticipate that this research will not only contribute to the advancement of their own professional trajectories by offering a comprehensive understanding of AI and digital marketing but will additionally function as a valuable insight for industry specialist aiming to stay updated on recent breakthroughs and advancements in this transformative field. Recognizing the expansive scope of digital marketing, the authors have opted to narrow their focus to this specific domain.

The reasoning outlined above played a crucial role in the choice to centralize the discussion on digital marketing in this thesis. More precisely, the author intends to delve into the realms of artificial intelligence, machine learning, and digital marketing to unveil significant advantages. Furthermore, the author will scrutinize the forthcoming consequences of integrating artificial intelligence into digital marketing. The aim of this research is to facilitate the comprehension and practical usages of AI for marketing professionals.

## 1.6 Definitions of the key concepts

**Artificial Intelligence (AI):** Artificial Intelligence (AI) refers to the theory and advancement of computer systems capable of performing tasks that typically require human intelligence, including visual recognition, voice recognition, complex decision-making, and language interpretation (Sheikh et al., 2023). The discipline referred to as Artificial Intelligence (AI) revolves around creating computer systems capable of performing tasks that typically require human intelligence, such as visual perception, speech recognition, decision-making, and language translation, as explained by Ertel (2016).

**Digital marketing:** Digital marketing encompasses a varied range of approaches for promoting and endorsing products or services using digital channels, including but not limited to the internet, mobile devices, social media, search engines, email, and various other digital platforms. It incorporates a range of online techniques and plans to engage with a specific audience, establish brand recognition, generate online traffic, and ultimately accomplish business goals. (Chaffey & Smith, 2019)

## 1.7 AI in brief

AI gives machines the ability to behave, think, and think like people. Like humans, machines can adjust to new circumstances and learn from past experiences. AI provides deeper insights by doing more thorough information analysis. AI uses sophisticated algorithms to provide various gadgets and devices—such as voice assistants, GPS trackers, and home automation—new capabilities. Because AI is able to learn from a variety of data sources, it is transforming a number of industries, including marketing, the medical field, and banking.

## 1.8 AI evolution and history

The term AI denotes computational systems that execute tasks in a manner similar to human decision-making processes. Originating as a scientific field in the mid-1950s, AI has undergone significant development, becoming a vital asset for business and technology management. It's essential to acknowledge that AI is an ever-evolving field; what was once considered cutting-edge is now integral. Currently, AI plays a crucial role in various domains, including image recognition, robotics, real-time analytics, natural language processing (NLP), and interconnected systems within the Internet of Things (IoT) (Greengard, 2019).

There are multiple pathways to achieve artificial intelligence, for instance, ML involves machines learning objectives by autonomously analyzing experiences and gathered data, as demonstrated in tasks like differentiating objects such as bananas through exposure to various images instead of explicit coding. Meanwhile, NLP enables the automatic manipulation of natural language in text and speech, leading to advancements like email spam detection (Bitext, 2019). Vision, which enables machines to "see" by capturing and analyzing information through cameras, analogical conversion, and digital processing, shares common ground with ML. Robotics encompasses the use of AI in tasks too difficult or repetitive for humans, utilized in various sectors like manufacturing, healthcare, and law enforcement. Autonomous vehicles, including cars, trucks, ships, trains, and flying drones, form a distinct realm within AI (Kumar, 2018).

The classification of artificial intelligence follows two primary methods: Type 1, categorized by capability, and Type 2, categorized by functionality. ANI, referred to as weak AI, involves machines performing narrowly defined tasks without the capacity for independent thought. AGI, or strong AI, signifies machines capable of human-like thinking and decision-making. ASI, an imagined stage, envisions machines surpassing human skills. Each type addresses specific aspects such as consciousness, memory, reactivity, and emotional intelligence (Escott, 2017; Dataflair, 2019; Joshi, 2019).

The history of AI traces back to early dreams of developing machines with human-like abilities. In the 1940s, connectionism emerged as a school of thought exploring stages of thinking, while Alan Turing's work in the 1950s investigated the mathematical possibilities of AI. The Dartmouth Summer Research Project on AI in 1956 marked a significant event where top researchers discussed AI. From 1956 to 1974, AI experienced substantial growth, with advancements in algorithms and government funding, leading to breakthroughs like ELIZA and the General Problem Solver. The 1980s witnessed renewed interest in AI due to increased funds and advancements in information and algorithms. Japan's Fifth Generation Computer Project (FGCP) aimed to revolutionize AI but faced challenges. In the early 1990s, AI research shifted toward intelligent agents, which evolved into personal digital assistants (Foote, 2016; Anyoha, 2017).

AI has made substantial contributions to various sectors, including marketing, finance, technology, and entertainment. The development of AI language is anticipated as a significant future trend. The pervasive presence of machines in society highlights the inevitability of interacting with expert systems and engaging in multilingual conversations with instant translation.

While discussions on policy and ethics will intensify, AI will continue its improvement and integration into society (Greengard, 2019).

## **2 Literature review**

In this chapter, we will present a review of Related Work that aligns with the focus of this thesis. We will delve into diverse interpretations of the intersection between Digital Marketing and Artificial Intelligence. Additionally, we will examine various phases of Digital Marketing, exploring how Artificial Intelligence is applied and discussing its perception and utilization in handling data. Furthermore, we will analyze and compare different aspects within the body of Related Work, aiming to elucidate how the thoughts of this study stands out from the perspectives presented and explored by other researchers.

### **2.1 Artificial intelligence**

The idea of AI, which involves imparting human intelligence to machines, originated in the 1950s with the introduction of the Turing Test by Alan Turing. Coined by Turing and John McCarthy in 1955, during the 1956 Dartmouth Summer Research Project on Artificial Intelligence, the phrase "Artificial Intelligence" acquired prominence. As stated by Wichert (2020), It swiftly addresses intricate challenges by effectively managing vast amounts of complex data. Wichert (2020) emphasizes ongoing advancements in quantum information systems, highlighting the importance of integrating machine learning into AI for sustained benefits, even in the absence of a comprehensive quantum computing solution.

Discussing ethical considerations, Reig-Bolaño et al. (2013) emphasize Generative Adversarial Networks (GANs) as an AI advancement. GANs use algorithmic designs to create neural networks that generate synthetic content, addressing real-world dynamics in game theory. However, ethical concerns arise due to the potential misuse of GANs for creating deceptive content.

Highlighting AI's role in automating marketing operations, Tanveer et al. (2021) emphasize the use of deep learning for enhanced computer precision in recognizing user behavior. This automation streamlines lead identification, allowing marketers to concentrate efforts on the most qualified leads. AI also enables personalized product offerings based on demographic, geographic, and purchase history data.

Hermann (2021) underscores AI's contribution to tailoring relevant messaging for clients through predictive analysis. This capability is exemplified by companies like Netflix and Amazon, which utilize AI to recommend programs and items based on user preferences.

## **2.2 Digital marketing and AI**

"Digital marketing" is the phrase used to describe the practice of advertising products and services using websites, mobile apps, social media, and search engines. In the 1990s, when the internet began to take off, so did its appeal (Barone, 2022). The ideas of digital marketing are highly compatible with those of conventional marketing, offering firms a modern way to interact with customers and comprehend their behaviour. Plans and campaigns for business marketing often incorporate both traditional and digital marketing tactics (Barone, 2022).

In the past, businesses used radio, television, and print ads to promote their goods. Even if these techniques are still useful, the internet has changed the way companies interact with their clientele. Digital marketing serves as a medium through which marketing initiatives and consumer input are combined to create a dynamic, two-way dialogue between companies and customers (Barone, 2022).

Interactions are rising by more than 20% a year because of a growing number of offline customers switching to digital technologies and a growing number of younger, tech-savvy consumers joining the market (Bughin, 2015). Understanding the current level of scientific research in digital marketing and how it relates to the corporate world is crucial. This assessment attempts to ascertain the degree to which research in digital marketing lags behind corporate industry improvements and to reveal the important role artificial intelligence (AI) plays in digital marketing strategy and research.

## **2.3 Artificial intelligence in digital marketing**

The study of client behavior is a fundamental use of artificial intelligence in digital marketing. According to Sung et al. (2021), artificial intelligence (AI) makes it easier to interpret large datasets, which helps firms spot patterns and trends in customer behavior. Marketers can now anticipate consumer preferences, improve content, and provide individualized experiences thanks to machine learning algorithms.



The capacity of AI to provide individualized consumer experiences is a major focus of current research. Patel et al. (2023) highlight the use of AI in developing business plans that are focused on the needs of customers. The study emphasizes how artificial intelligence (AI) enhances consumer engagement and happiness through individualized content distribution and tailored recommendations, which leads to effective marketing outcomes.

It is essential to address ethical issues when using AI in marketing efforts. In exploring the ethical aspects, DG (2020) places particular emphasis on fairness, privacy, and transparency in AI applications. It is important to comprehend and address ethical dilemmas to cultivate customer trust and guarantee the ethical application of AI in marketing initiatives. According to Rosenberg's (2018) research, expenditure on AI has increased significantly across all industries, with the marketing sector expected to see the most rise. BCC Research, which projects an annual growth rate of 43.6% to reach an estimated 8.8 billion euros in the machine learning solutions market by 2022, provides more evidence of the economic significance of AI in digital marketing.

Rust (2020) and Huang and Rust (2018) both emphasize how AI is revolutionizing marketing expertise. Businesses are investing in machine learning to take advantage of the abundance of data that is accessible as customer interactions become more tailored to the individual. Chui et al. (2018) quoted a McKinsey & Company report that shows that particularly in consumer-centric businesses, marketing and sales are the areas where AI has the biggest influence.

Kolbjornsrud et al. (2016) emphasize how artificial intelligence may lead to new commercial prospects. They contend that businesses hoping to stay competitive in the ever-changing digital ecosystem must include AI in their marketing strategy (Pradeep et al., 2019).

According to Mari (2019), marketing is one of the industry's most utilizing AI. The discovery of client needs, matching those needs with suitable goods and services, and encouraging purchases are essential components of marketing jobs (Mari, 2019). As demonstrated by 2018 McKinsey research that found that out of over four hundred use cases, marketing held the most potential for AI.

The wealth of individualized information obtained by AI facilitates the creation of customer engagement and retention strategies through tailored suggestions and messages (Huang & Rust, 2021). AI in marketing reduces errors by optimizing campaigns, automating procedures, and

producing data-driven reports all while lacking empathy or compassion (Huang & Rust, 2021). One notable example of how AI is being used in practice is the popular tailored email marketing campaigns (Huang & Rust, 2021).

AI applications are best demonstrated by Chaffey and Ellis-Chadwick (2019) with chatbots, which are intelligent algorithms that mimic human interaction to understand and reply to customer inquiries and even streamline online transactions. Chatbots are becoming increasingly popular because so many companies are including them on websites or other platforms like Meta Messenger (Alkhayyat & Ahmed, 2022). Chatbots were originally designed to improve customer service efficiency. Because of their analytical capabilities, chatbots especially those that employ Meta Messenger help to improve the applications of digital marketing (Chaffey & Ellis-Chadwick, 2019).

Numerous academic works explore the many ways that artificial intelligence is being used in digital marketing. Brei (2020) has conducted research that offers a thorough understanding of the use of AI in several domains, including predictive analytics, consumer segmentation, and tailored content suggestions. To increase targeting accuracy and boost overall campaign success, the incorporation of machine learning algorithms to optimize marketing campaigns is being investigated.

Research has focused on how AI affects consumer experience in the context of digital marketing. Academics such as Van Esch & Stewart Black (2021) investigate how artificial intelligence (AI) technologies such as chatbots and virtual assistants advance tailored client interactions. The impact of AI-driven customization on consumer pleasure, brand perception overall, and loyalty is also examined in the literature.

Researchers highlight the benefits of artificial intelligence (AI) in digital marketing, but they also point out the drawbacks and moral dilemmas that come with using it. Research by Nassar & Kamal (2021) addresses concerns about algorithmic bias, data privacy, and marketers' moral obligations while using AI tools. The ethical and long-term use of AI in the marketing sector requires an understanding of these issues and their mitigation.

In the concluding section of the literature study, new developments, and directions in the use of AI in digital marketing are discussed. Johnsen's (2017) research provides valuable insights into future developments, including the use of computer vision, reinforcement learning, and

natural language processing in marketing tactics. To remain on the forefront of technological innovation, researchers and marketers must both comprehend these emerging trends. The literature also stresses how crucial it is for marketers to strengthen their skill sets in the AI era.

### **3 Methodology**

This chapter describes the methodological framework and explores the qualitative parts of the thesis. It offers a thorough explanation of data collection, dependability, techniques for analysis, constraints, and ethical issues. Pre-conducted template analysis and structured interview questions are used in the data collection process.

#### **3.1 Strategizing Investigation**

This study is done by a questionnaire survey among two group of people one is random 60 people from [www.facebook.com](http://www.facebook.com) (a social media platform) and other group of 28 people belong to different professional. This study adopts a qualitative approach, employing one-on-one semi-structured interviews (Saunders et al., 2009). Unlike quantitative methods that rely on statistics, a quantitative approach prioritizes the content of responses. Although the number of responses is typically lower, qualitative methods yield more profound insights into a specific subject (Bell et al., 2022). This approach facilitates a better understanding of detailed information and the assimilation of new experiences. Consequently, data for this paper will be collected through qualitative methods. To effectively address the research question, an examination will be carried out, linking the theories outlined in the paper with insights obtained from interviews (Bell et al., 2022). This analysis, recognized for its coherence in analyzing qualitative data, will be employed for the analysis of this paper.

#### **3.2 Gathering the Data**

The methodology employed in this thesis is grounded in an inductive approach, as outlined in the research design. The research focuses comprises random personnel drawn from Facebook users and from different professions. The rationale for this approach lies in the investigation of the knowledge transfer from one discipline, AI, to another, digital marketing. This ensures a comprehensive understanding of current automation capabilities and AI technology. The examination of the Facebook user group aims to discern how they use AI and their perspectives on the initial knowledge required for the better use of AI in digital marketing, and the aim of the data from different professions is understand the current situation of AI in digital marketing at different levels.

The chosen data collection approach utilized open-ended interviews, aligning with the preference for exploratory research outlined by Saunders et al. (2009). These interviews, tailored to the research focus, were deemed a primary method. In contrast to self-administered surveys, semi-structured interviews offer the advantage of eliciting detailed responses that reflect the interviewee's perspectives. The semi-structured format facilitates the investigation of issues and the potential discovery of unforeseen insights, hence the term "semi-structured." Each interview allowed for adaptation, with the interviewer posing additional questions in varying sequences, as discussed by Saunders et al. (2009).

### **3.3 Examination of data**

Starting with the data analysis procedure, the Microsoft Office Excel 2019 software from the moment the initial data were acquired. The analysis commenced with the aim of deriving operational concepts and generating questions. This iterative process contributed to the refinement of data collection methods and enhanced the quality of the concepts obtained (Corbin & Strauss, 2008).

Qualitative research, a widely employed research method, was chosen for this study, particularly when in-depth insights and rich textual data were essential for a comprehensive understanding of the research subject. The data analyzed included the subjective opinions of experts on the application of artificial intelligence (AI) in marketing going forward. Furthermore, the study investigated the methods employed by frequent users of artificial intelligence (AI) technologies in marketing, particularly in the context of digital marketing. The information also highlighted the difficulties preventing AI from being seamlessly incorporated into marketing campaigns.

### **3.4 Implementation**

In the latter part of 2022, the author engaged in discussions with the facilitator regarding the chosen topic. During this phase, the author clearly outlined the field of study and articulated specific research questions. Once the research questions were established, the author conducted a thorough review of existing studies on the subject as part of the literature review. This review enhanced the author's comprehension of the research areas and identified information

that warranted further analysis. Drawing insights from these studies, the researcher then selected suitable methods and a research approach. The subsequent step involved data collection, with diverse sources being utilized due to the exploratory nature of the research.

The purpose of the data analysis was to support current knowledge and get an understanding of the useful uses of AI in digital marketing. Every interview was transcribed by the author, who highlighted the most important and relevant answers. Following a comprehensive analysis, the author presented observations, delved into the discussed answers, and formulated conclusions.

## **4 Outcome and Analysis**

As outlined in the research methods section, this thesis gathered data from numerous individuals, categorizing them into two groups, each comprising several participants from social media and from different professionals. The data is presented in two distinct segments, and the interview was organized and grouped based on their adjustment to this study.

### **4.1 Perspectives on Artificial Intelligence in digital marketing**

The participants' backgrounds and jobs are examined in the first section of the interview. In addition to sharing their ideas and opinions, participants were asked to name instances of artificial intelligence (AI) in marketing. The purpose of the interview rules was to make automated research on the use of AI in digital marketing easier.

### **4.2 Interview analysis of random social media user**

During the survey there were some questions about AI in digital marketing, here is the responses from the survey.

#### **4.2.1 Knowing the Artificial Intelligence in the case of Digital Marketing**

Artificial intelligence (AI) is having a significant influence on digital marketing and is quickly becoming a revolutionary force across several sectors. To what extent participants are familiar with AI in digital marketing is the goal of this study. Information gathered from a sample of participants sheds light on how common knowledge of AI is in digital marketing. According to survey results, every participant gave a resoundingly favorable answer, indicating a high level of familiarity with AI principles in digital marketing. Every single one of the sixty respondents said they were aware of AI in this scenario. Participants' unanimity in acknowledging their knowledge of AI points to a widespread comprehension of the function and importance of AI in digital marketing (Smith, 2019). This is consistent with the growing use of artificial intelligence (AI) in marketing tactics to boost productivity, precision, and overall campaign efficacy (Haleem et al., 2022).

The pervasive awareness of AI in digital marketing can be attributed to several factors. First, the mainstream adoption of AI-driven tools, such as chatbots, recommendation engines, and predictive analytics, in digital marketing campaigns has increased visibility and accessibility (Ibrahim, 2023). Moreover, industry publications, conferences, and online resources contribute to disseminating information about AI's impact on digital marketing (Digital Marketing Association, 2021).

The high level of awareness is indicative of the recognition that AI can optimize marketing efforts by automating tasks, analyzing vast datasets to derive actionable insights, and personalizing user experiences (Jones & Lee, 2020). This aligns with the broader trend of leveraging AI to improve customer engagement, optimize ad targeting, and streamline marketing operations (Haleem et al., 2022).

#### **4.2.2 Interaction with AI-Powered Digital Marketing Tools**

This study aimed to assess participants' personal interaction with AI-powered digital marketing tools or platforms. The survey sought to understand the extent to which individuals have engaged with artificial intelligence technologies in the realm of digital marketing. All 60 participants responded affirmatively, indicating that they have personally interacted with AI-powered digital marketing tools or platforms. The unanimous "Yes" responses suggest a high level of hands-on experience and exposure to AI-driven technologies in the context of digital marketing. The overwhelming positive responses indicate a widespread and hands-on familiarity with AI-powered digital marketing tools among the participants. This aligns with the global trend of increasing adoption of AI technologies in the marketing landscape, reflecting the growing importance of automation and data-driven decision-making in digital campaigns (De Bruyn et al., 2020). The participants' interaction with AI-powered tools can be attributed to the expanding availability of such technologies across various marketing platforms. Chatbots, predictive analytics, and personalized recommendation engines are just a few examples of AI applications that have become integral to modern digital marketing strategies (Kaperonis, 2023). These tools not only streamline marketing processes but also enhance the overall customer experience by delivering targeted and personalized content. The unanimous acknowledgment of personal interaction with AI-powered tools underscores the practical significance of these technologies in optimizing marketing efforts. Participants may have encountered AI in tasks such as



audience segmentation, content optimization, and automated email marketing, showcasing the multifaceted role that AI plays in modern digital campaigns (Haleem et al., 2022).

4.2.3 Understanding of AI Usage in the field of Marketing

This study aimed to gauge participants' self-assessed understanding of how artificial intelligence (AI) is used in digital marketing. Respondents were asked to rate their understanding on a scale from 1 to 5, with 1 being very poor and 5 being excellent. The collected data provides insights into the participants' perceived knowledge levels in this domain. The responses were varied, with scores ranging from 1 to 5. The majority of participants provided ratings of 4 or 5, indicating a relatively high level of perceived understanding. However, there were notable instances of lower ratings, with some respondents giving scores of 1 or 2, suggesting a limited understanding.

Table 1: Responses of participants about the understanding of AI in digital marketing.

Scale	Responses
1	9
2	14
3	10
4	15
5	12

The distribution of responses highlights a diverse range of perceived understanding regarding how AI is used in digital marketing. The majority of respondents rated their knowledge as moderate to high (4 or 5), indicating a substantial awareness of AI applications in the marketing landscape (Gartner, 2020). The participants who provided lower ratings (1 or 2) might benefit from additional educational resources or training to enhance their understanding of AI in digital marketing. This suggests that there may be a need for targeted initiatives to bridge knowledge gaps and promote a more comprehensive understanding of AI's role in shaping marketing strategies (De Bruyn et al., 2020). It is essential to recognize that the field of AI in digital marketing is dynamic, with continuous advancements and evolving practices. The varying levels of self-assessed understanding emphasize the importance of ongoing education and professional development to keep pace with the rapid changes in technology and marketing trends (Haleem et al., 2022).

#### **4.2.4 AI's potential to increase the efficiency of digital marketing: A Comprehensive analysis**

Digital marketing is one of the many businesses that have shown a great deal of interest in the integration of artificial intelligence (AI). This study aims to explore the potential benefits of artificial intelligence (AI) in enhancing the effectiveness of digital marketing strategies. Positive responses to the survey were requested, and this talk will go over several points that bolster the notion that AI can really enhance marketing strategies. Personalization is a key component of AI in digital marketing. Large volumes of data may be analyzed by AI systems to comprehend the preferences, actions, and demographics of specific customers. As a result, marketers may provide very tailored and targeted content, increasing consumer engagement (Daqar & Smoudy, 2019). In addition to improving the consumer experience, personalization raises conversion rates and fosters customer loyalty. The automation powers of AI simplify digital marketing procedures and free up marketers' time for more productive use. Routine operations like client segmentation, data analysis, and even content production may be handled by automated programs. This ensures more accurate and data-driven decision-making by saving time and lowering the possibility of human mistakes (Davenport & Ronanki, 2018). Marketers are able to concentrate on the strategic elements of their campaigns because of automation's efficiency improvements. Marketers can forecast trends and customer behavior with accuracy because of AI's predictive analytics capabilities. AI systems can offer insightful information for decision-making by examining past data and seeing trends (Davenport et al., 2020).

This predictive power allows marketers to make informed choices about campaign strategies, content creation, and resource allocation, ultimately leading to more successful marketing outcomes. Chatbots powered by AI have become integral in fostering real-time customer engagement. These sophisticated chatbots can answer consumer questions right away, provide tailored suggestions, and even help with purchases. Consequently, companies can offer 24/7 customer service, which enhances client happiness and enhances the impression of their brand (Hwang & Chang, 2023).

#### **4.2.5 AI-Powered Digital Marketing Tools Utilization and Preferences**

In our survey of AI-powered digital marketing tools, participants overwhelmingly indicated a predominant usage of ChatGPT in their marketing endeavors. The data collected from respondents revealed that ChatGPT was the most commonly employed tool, with the majority citing its efficacy in enhancing communication, content creation, and customer engagement. Additionally, a few participants mentioned the utilization of Notion AI, Taplio, and ChatGPT in combination. This suggests a trend towards integrating multiple AI tools to leverage diverse functionalities for a comprehensive digital marketing strategy. The consistent and repeated mention of ChatGPT across responses indicates a high level of satisfaction and reliance on this specific tool. ChatGPT, developed by OpenAI, has demonstrated its versatility in various applications, including generating creative content, providing customer support, and automating routine communication tasks. The prevalence of ChatGPT in digital marketing strategies aligns with its reputation for natural language processing and generation capabilities. OpenAI's GPT-3.5 architecture, the foundation of ChatGPT, has proven to be a groundbreaking advancement in language models, allowing for nuanced and context-aware interactions.

In a study published by Brown et al.,(2020), address the evolution and functionality of the GPT-3, emphasizing its capacity to comprehend and generate text that is similar to that of a human subject to a range of stimuli. The adaptability and broad usage of ChatGPT in our research align with OpenAI's findings, verifying the model's efficacy in practical scenarios. Furthermore, the integration of ChatGPT with Taplio and Notion AI points to a rising trend toward hybrid AI systems. Notion AI, known for its document collaboration and knowledge management features (Ivanov et al., 2019), and Taplio, specializing in AI-driven marketing analytics (Suleiman et al., 2021), contribute to a comprehensive toolkit for marketers seeking diverse functionalities.

As the digital marketing landscape continues to evolve, the reliance on AI tools becomes increasingly apparent. The consistent preference for ChatGPT in our survey underscores its impact on content creation and communication within the marketing domain. The chart is divided into segments representing different AI tools, with each slice indicating the percentage of usage. Notably, ChatGPT stands out with a consistently high percentage, suggesting a strong preference among respondents.

#### Most used applications or tools

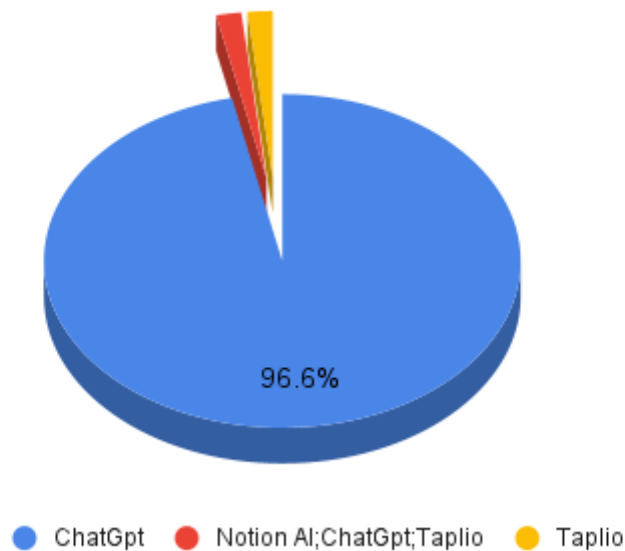


Figure 1: The pie chart represents the distribution of AI tool usage in the context of content creation and communication within the marketing domain.

#### 4.2.6 Concerns Regarding the Use of AI application in online advertising

Participants in our analysis of worries about AI's application in digital marketing voiced a range of anxieties, with job displacement and privacy emerging as the main concerns. The information gathered brought to light a recurrent topic of worry about the possible fallout from using AI in the marketing industry. One key worry that came up time and time again among the participants was privacy. Concerns around the gathering, handling, and use of personal data are related to AI's usage in digital marketing. This is in line with the larger conversation about data privacy in the digital era, as people become more cautious about how their data is managed (Acquisti et al., 2016). The repeated mention of privacy concerns underscores the need for marketers and AI developers to prioritize robust privacy measures to gain and maintain consumer trust. Another major issue that surfaced was job displacement, which reflected participants' concerns about the possible effects of AI on jobs in the marketing industry. The acknowledgment of job displacement aligns with the broader societal conversation surrounding automation and AI technologies affecting various industries (Brynjolfsson & McAfee, 2014). As AI tools continue to automate routine tasks in digital marketing, it becomes imperative for industry stakeholders to address the potential consequences and invest in upskilling and re-skilling initiatives to mitigate adverse effects on the workforce. While not as frequently mentioned as privacy and job displacement, the fact that ethics was raised as a worry shows that participants are aware of the moral ramifications of artificial intelligence in digital marketing. Ethical concerns may encompass issues such as bias in algorithms, transparency in decision-making processes, and the responsible use of AI (Diakopoulos, 2016). This highlights the importance of incorporating ethical frameworks and guidelines in the development and deployment of AI technologies to ensure fair and responsible practices.

The concerns expressed by participants align with broader research on the societal impact of AI. Acquisti et al. (2016) discuss the challenges of protecting privacy in the age of big data, emphasizing the need for robust privacy measures. Brynjolfsson and McAfee (2014) examine the implications of technological advancement, including AI, on employment and discuss strategies for managing workforce transitions. Diakopoulos (2016) provides insights into the ethical considerations in AI and emphasizes the importance of addressing biases and promoting transparency.

In conclusion, the concerns raised by participants regarding privacy, job displacement, and ethics underscore the multifaceted challenges incorporated with the integration of AI in digital

marketing. Addressing these concerns requires a collaborative effort among marketers, developers, policymakers, and researchers to establish ethical guidelines, ensure privacy protection, and mitigate potential negative impacts on employment. To better understand the distribution of concerns among participants, we present Figure 2: a pie chart reflecting the percentage of issued concerns. This chart provides a visual representation of the relative importance of privacy, job displacement, and ethics in the context of AI integration in digital marketing.

Count of What concerns, if any, do you have about the use of AI in digital marketing?

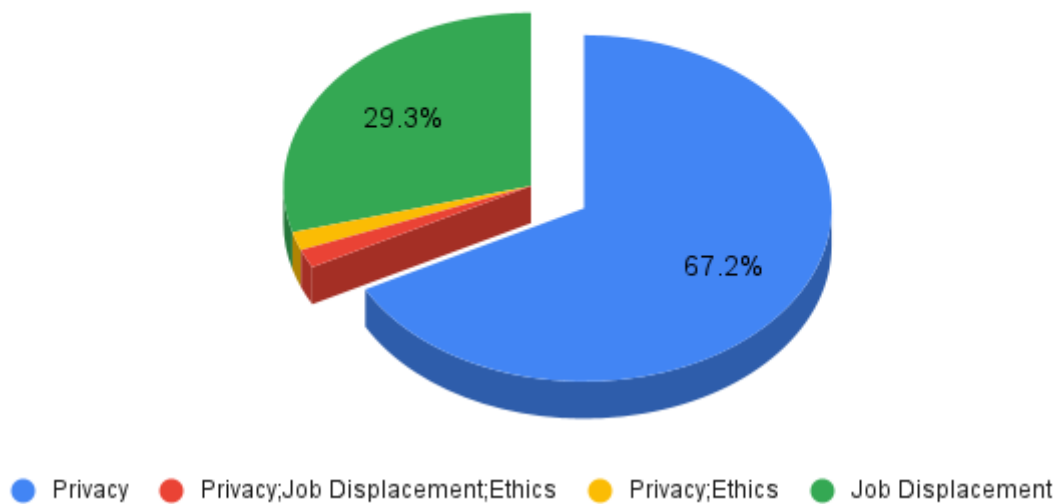


Figure 2: Pie\_chart reflecting the percentage of concern issued.

#### 4.2.7 Embracing AI-Driven Personalization: Consumer Perceptions and Engagment in Marketing Strategies

Artificial intelligence (AI) has been more and more prevalent in marketing methods in recent years, particularly with the adoption of AI-driven personalization. This study aimed to explore consumer attitudes towards brands or companies that implement AI-driven personalization in their marketing campaigns. The data collected, consisting of responses from a sample of participants, forms the basis of our analysis. The survey results indicate a unanimous positive inclination towards engaging with brands or companies that utilize AI-driven personalization in

their marketing campaigns. Most of the respondents provided a positive response, consistently choosing "Yes." The overwhelming positive response to AI-driven personalization suggests a widespread acceptance and potential preference among consumers for personalized and tailored marketing experiences. This finding aligns with the broader trend of technology-driven advancements in marketing strategies to enhance customer engagement and satisfaction. The positive inclination towards AI-driven personalization can be attributed to the benefits it offers in tailoring marketing messages to individual preferences. Personalization enhances the relevance of content and promotions, fostering a stronger connection between consumers and brands (Smith & Wheeler, 2002). This aligns with the increasing demand for customized experiences in the modern consumer landscape. Consumers may perceive brands employing AI-driven personalization as technologically advanced and innovative. This positive perception can contribute to an enhanced brand image and attractiveness, particularly among tech-savvy consumers (Atwal et al., 2014). The study's findings highlight the potential for AI-driven strategies to position brands as forward-thinking and customer-centric. The effectiveness of AI-driven personalization in delivering accurate product recommendations and targeted content contributes to an overall improved user experience. Consumers are likely to appreciate the convenience and efficiency of personalized marketing messages, leading to increased engagement (Haleem et al., 2022). This aligns with the broader goal of creating a seamless and positive customer journey.

## Consumer Perceptions and Engagement in Marketing Strategies

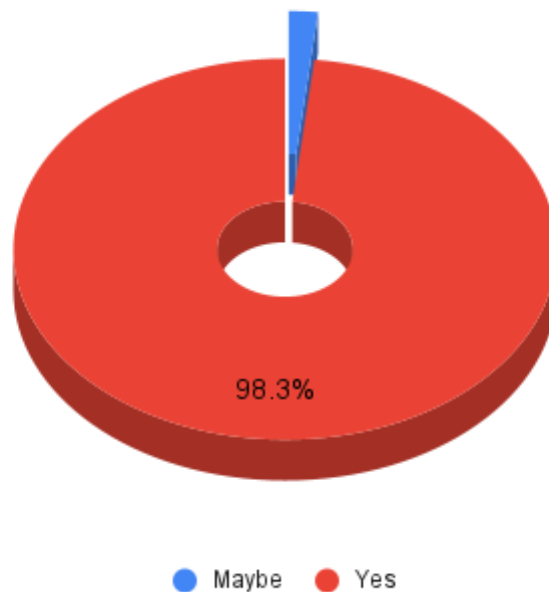


Figure 3: Graph showing the consumer perceptions and engagement in marketing strategies.

### 4.2.8 The Effectiveness Paradigm: Unveiling the main benefits of AI in Marketing

Artificial Intelligence (AI) integration in digital marketing has become a transformative force that is changing how companies interact with their target market. The perceived benefits of utilizing AI in digital marketing are examined in this study, with an emphasis on the technology's efficacy. In this context, participants were invited to provide their thoughts on the main benefits of artificial intelligence. The predominant response from participants highlighted the perception that the key advantage of using AI in digital marketing is its effectiveness. The singular word provided by the participant was "More effective." The concise response emphasizing effectiveness reflects a widely acknowledged sentiment within the marketing community. Several key advantages can be attributed to the use of AI in digital marketing that contribute to its perceived effectiveness. AI enables advanced data analysis, allowing marketers to personalize content and target specific audience segments with precision (Davenport et al., 2010). This personalization enhances relevance, increasing the likelihood of engagement and conversion. AI processes vast amounts of data quickly and accurately, providing marketers with valuable insights for informed decision-making (McAfee & Brynjolfsson, 2012). This data-driven approach helps



optimize marketing strategies, ensuring resources are allocated efficiently. Automation through AI streamlines routine tasks such as email marketing, social media posting, and customer interactions (Chaffey & Ellis-Chadwick, 2019). This not only saves time but also ensures consistency and efficiency in marketing efforts. AI-driven predictive analytics forecast trends and consumer behavior, aiding marketers in anticipating market shifts and adapting strategies proactively (Davenport, 2006). This foresight is valuable for staying ahead in dynamic digital landscapes.

#### **4.2.9 Exploring Trust and Comfort: How Consumers View AI-Enhanced Data-Driven Marketing**

This study delves into consumer comfort levels regarding the use of Artificial Intelligence (AI) by brands for collecting and analyzing personal data to enhance their marketing efforts. The data, collected through participant responses, serves as the foundation for exploring the prevailing sentiments on this evolving aspect of marketing. The overwhelming majority of participants expressed comfort with brands using AI to collect and analyze their personal data. The unanimous comfort level demonstrated by the participants signals a noteworthy aspect of consumer attitudes towards AI-driven data collection and analysis in marketing. The high level of comfort suggests a baseline level of trust that consumers place in brands when utilizing AI for data-driven marketing. For customized marketing campaigns to be successful, trust is essential, and the acceptance of AI-driven data analysis indicates a certain level of confidence in the responsible use of personal information (Smith et al., 1996). Participants may associate their comfort with the perceived benefits of AI-driven data analysis. These benefits include more personalized and relevant marketing communications, tailored product recommendations, and an overall enhanced customer experience (Haleem et al., 2022). The positive perception of these potential advantages likely contributes to the overall comfort level expressed by respondents. Brands that educate consumers about how AI is used, along with transparent data practices, are more likely to foster a sense of comfort among their audience (Phelps et al., 2000). Communication strategies that emphasize the responsible and ethical use of AI technologies can play a crucial role in building and maintaining consumer trust. Comfort levels may also be influenced by industry norms and cultural factors. Consumers in certain industries or regions may be more accustomed to and accepting of AI-driven data analysis, reflecting the evolving nature of consumer expectations in the digital age (Malär et al., 2011).

### navigating trust and comfort of consumer

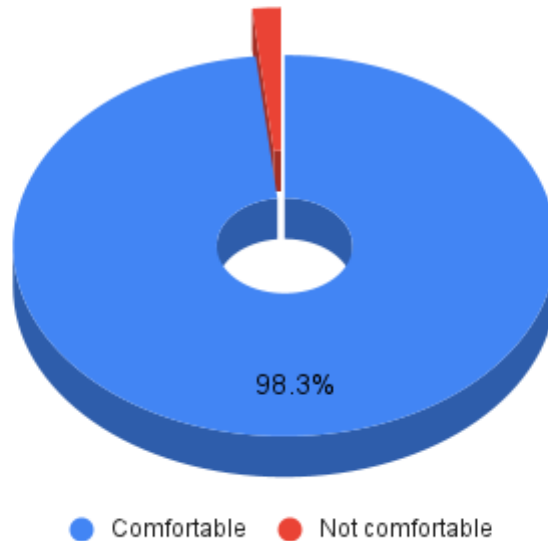


Figure 3: Graph showing the navigating trust and comfort of the consumer.

#### 4.2.10 Collective Trust in AI-Powered Customer Service: The Effectiveness of Chatbots and Virtual Assistants

This study explores the perceptions of participants regarding the effectiveness of AI-powered chatbots and virtual assistants in handling customer queries and delivering satisfactory responses. The data collected, consisting of affirmative responses, forms the basis for understanding the confidence consumers place in these AI-driven technologies. All participants (100%) provided affirmative responses, expressing belief in the capability of AI-powered chatbots and virtual assistants to effectively handle customer queries and deliver satisfactory responses. The unanimous positive sentiment towards AI-powered chatbots and virtual assistants signifies a strong vote of confidence in the capabilities of these technologies in addressing customer queries. Several factors contribute to this widespread belief. The evolution of Natural Language Processing (NLP) technologies has empowered AI-driven chatbots and virtual assistants to comprehend and respond to customer queries in a manner that closely resembles human interaction (Caldarini et al., 2022). The participants' confidence likely stems from the improved ability of these systems to understand and interpret user input accurately. AI systems, particularly those powered by machine learning algorithms, continually learn from interactions and adapt their responses over time (Li et al., 2020). This adaptive learning capability

contributes to the effectiveness of chatbots and virtual assistants in providing satisfactory responses tailored to individual customer needs. AI-powered systems operate 24/7, ensuring round-the-clock availability for customer queries (Dale, 2016). The immediacy of responses contributes to customer satisfaction, as users can receive assistance or information promptly, enhancing the overall customer experience. From a business perspective, the deployment of AI-powered chatbots and virtual assistants offers cost efficiencies by automating routine customer interactions (Xu et al., 2017). This efficiency may positively impact the perception of businesses that leverage AI technologies for customer service.

### **4.3 Interview analysis of different professionals**

#### **4.3.1 Survey Participants and Demographics:**

The data collected represents various positions within the field of digital marketing, and the frequency of each position. The results suggest that Marketing Manager is the most frequently mentioned position, followed by SEO Analyst and Digital Marketing Specialist. It's important to note that there is one entry indicating 'None,' which may represent individuals who do not currently hold a specific digital marketing position. The dominance of the Marketing Manager role in the dataset indicates that this position is prevalent among the respondents. Marketing Managers typically hold key responsibilities in planning, implementing, and overseeing marketing strategies (Elg et al., 2011). This could imply that organizations often seek experienced professionals to lead their marketing efforts. SEO Analysts are the second most frequently mentioned position, suggesting the importance of search engine optimization in digital marketing strategies. Digital Marketing Specialists, though mentioned less frequently, still represent a significant portion of the dataset. These experts most likely have specializations in content marketing, email marketing, social media, or other digital marketing platforms (Chakraborty & Jain, 2022). The presence of one entry indicating 'None' implies that there is at least one respondent who doesn't currently hold a specific position in the field of digital marketing. This may be due to various reasons such as being in transition between roles or not currently employed in the digital marketing sector.

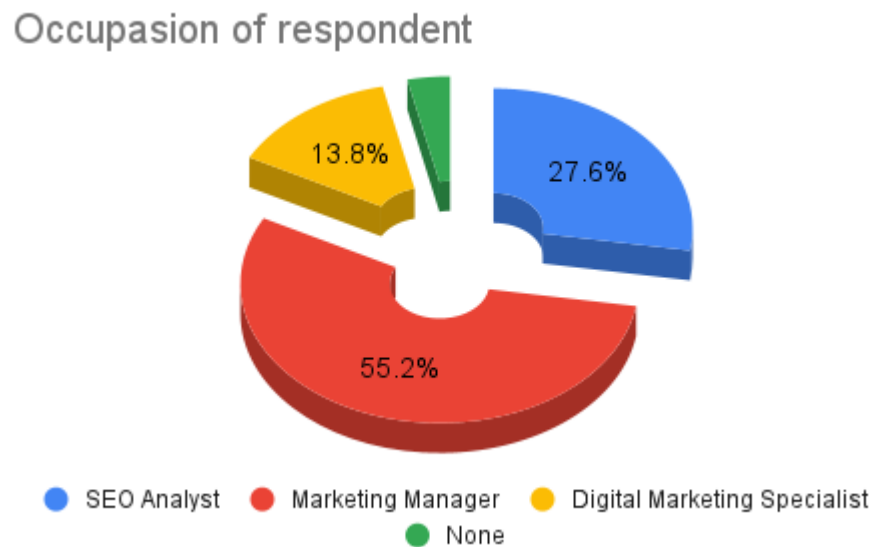


Figure 4: Pie chart showing the professions of the participants.

#### 4.3.2 Experience Levels:

The data on years of experience in digital marketing reveals interesting insights into the professional background of the respondents. The majority of the respondents, 20 out of 40, have accumulated 3–5 years of experience in the field. This suggests a substantial presence of mid-level professionals who have likely gained a solid understanding of digital marketing practices and have been actively involved in implementing strategies (Chaffey & Smith, 2012).

Another noteworthy observation is the considerable representation of individuals with 0–2 years of experience, constituting 40% of the dataset. This may indicate a significant influx of newcomers or recent entrants into the digital marketing domain. These individuals are likely in the early stages of their careers, still building foundational skills and gaining exposure to various aspects of digital marketing.

Interestingly, there is a smaller group of respondents, 4 out of 40, with 6–8 years of experience. This group may represent seasoned professionals who have witnessed the evolution of digital marketing over a longer duration, potentially holding strategic roles or specializing in specific areas (Dodson, 2016).

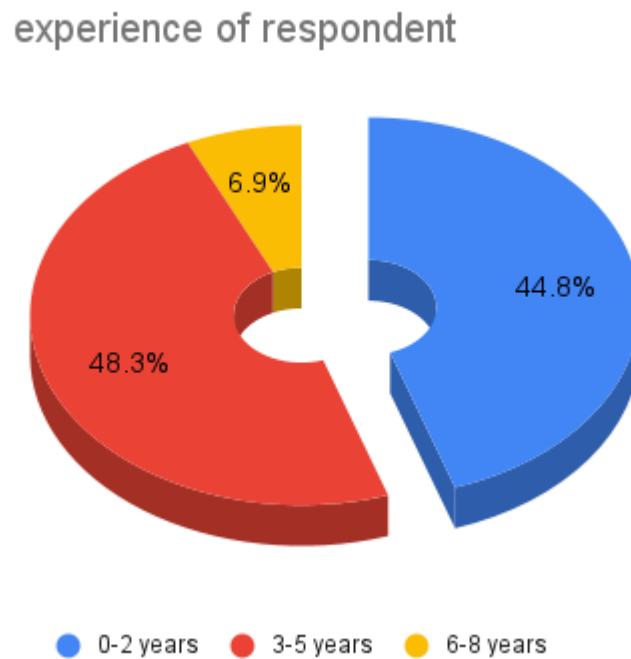


Figure 5: Graph showing the years of experience.

#### 4.3.3 Knowledge of ai in online advertising

The purpose of this study was to evaluate participants' knowledge about artificial intelligence (AI) as it relates to digital marketing. A scale of 1 to 5 was used to ask participants to assess their level of knowledge, where 1 represented "Limited Understanding" and 5 represented "Expert Understanding." The findings shed light on respondents' present level of AI expertise in the field of digital marketing. The survey gathered responses from participants, with ratings ranging from 1 to 5. The majority of respondents rated their knowledge at the highest level, indicating an "Expert Understanding" of AI in digital marketing. The remaining participants rated themselves between 3 and 4, suggesting a solid understanding with room for improvement. The dominance of high ratings suggests a widespread perception of proficiency in AI within the surveyed digital marketing community. This aligns with findings from recent studies (Suleiman et al., 2021) and industry reports (Van Esch & Stewart, 2021) that highlight the growing importance of AI in optimizing marketing strategies, enhancing customer experiences, and driving business outcomes.

The three participants who rated their knowledge below 4 might indicate a subset of the community that perceives their understanding as moderate or in need of improvement. It would be

beneficial to explore the specific areas where these respondents feel less confident, as this information could guide targeted educational efforts. Similar observations have been made in studies by Suleiman et al. (2021), emphasizing the importance of addressing specific knowledge gaps for a more well-rounded skill set in the industry.

The outlier who rated their knowledge at 1 might be an individual with limited exposure to AI concepts in the context of digital marketing. This underscores the importance of inclusive educational initiatives to bridge knowledge gaps and ensure a more uniform understanding across the industry. This assertion is supported by the recommendations put forth by the Digital Marketing Association (2022) in their *State of the Industry Report: AI Trends in Digital Marketing*.

Histogram of Understanding AI in digital marketing

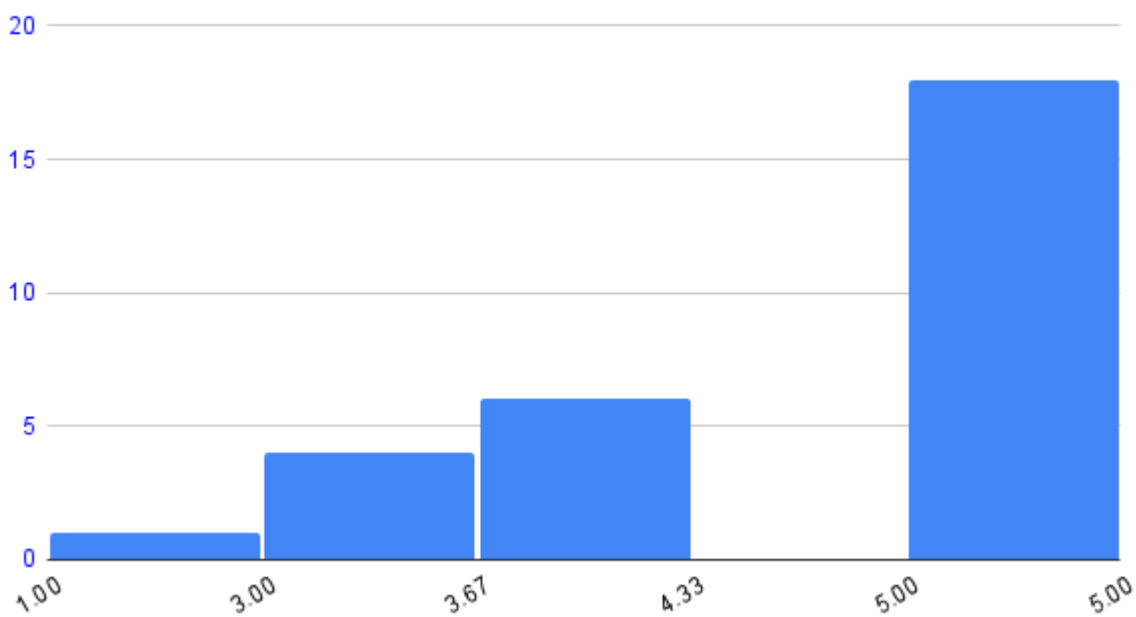


Figure 6: Histogram showing the scale on AI understanding.

#### 4.3.4 Integration of AI Technologies in Digital Marketing Strategies

Of 28 respondents, 25 said their companies had used artificial intelligence (AI) in their digital marketing plans, while 3 respondents reported that their organizations have not yet adopted AI in this context. The overwhelmingly positive response, with 89% of organizations implementing AI technologies in their digital marketing strategies, aligns with the increasing trend of AI integration across various industries. These results validate the idea that AI is increasingly being

used as a common tool to improve marketing campaigns, improving efficiency, and gaining a competitive edge (Suleiman et al., 2021).

The three organizations that have not implemented AI technologies may represent a subset of the industry that has yet to fully embrace AI in their digital marketing strategies. Possible reasons for this could include resource constraints, organizational inertia, or a perceived lack of immediate benefits. It would be interesting to explore the specific challenges these organizations face in adopting AI and whether there are common barriers that could be addressed through industry-wide initiatives (Digital Marketing Association, 2022) .

The widespread adoption of AI in digital marketing is consistent with the recommendations made by Suleiman et al. (2021), who argue that organizations failing to embrace AI may fall behind in terms of efficiency and competitiveness. However, it is crucial to recognize that successful AI implementation requires a strategic approach, ongoing training, and an understanding of the unique challenges each organization faces (Van Esch & Stewart., 2023).

Count of Has your organization implemented any AI technologies in your digital marketing strategies?

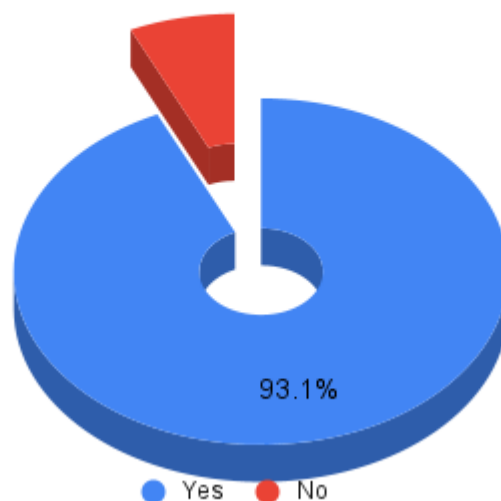


Figure 7: Chart showing the implementation of AI technologies.

#### **4.3.5 Assessing Perceived Benefits: Integrating AI into Digital Marketing Strategies**

The purpose of this study is to investigate participants' perceptions of the main advantages of using AI in digital marketing tactics. After asking for their opinions, respondents' comments were grouped into topics. The results provide insight into the advantages that AI integration is thought to bring to the field of digital marketing. The advantages that respondents mentioned most frequently were enhanced customization, enhanced efficiency, enhanced targeting, and better data analysis. AI's capacity to analyze vast volumes of data quickly and reliably is consistent with the recurrent theme of "better data analysis" as a major benefit (Halim et al., 2022). This opinion is in line with new research that highlights the critical role artificial intelligence plays in gleaning useful insights from complicated datasets (Gupta et al., 2023).

Respondents also highlighted "Increased Efficiency" as a key advantage. This aligns with the broader industry consensus that AI streamlines processes, automates routine tasks, and enhances overall campaign management (Haleem et al., 2022). Efficient resource allocation and reduced manual effort contribute to improved operational outcomes.

The theme of "Improved Personalization" underscores the role of AI in tailoring marketing messages to individual preferences, creating a more engaging and relevant customer experience (Van Esch & Stewart, 2021). Personalization has been becoming as a competitive differentiator



in the field of digital marketing, and AI plays a pivotal role in achieving this level of customization.

Count of In your opinion, what is the most significant benefit of integrating AI into digital marketing?

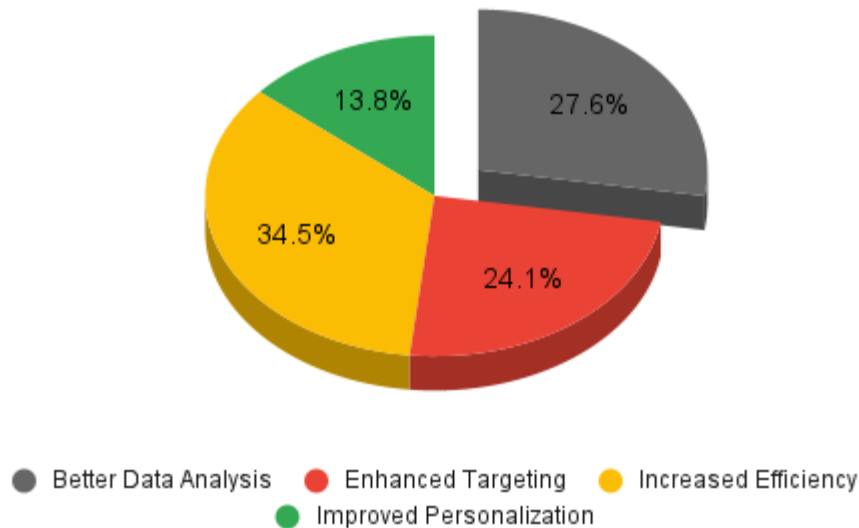


Figure 8 : Pie chart showing the opinions of the participants.

#### 4.3.6 Navigating Challenges in AI Adoption for Digital Marketing: A Survey Analysis

This study investigates the primary challenges faced by organizations in adopting Artificial Intelligence (AI) for digital marketing. Participants were asked to identify the main hurdles, providing insights into the obstacles hindering widespread AI integration in the digital marketing landscape. The most frequently cited challenges include Limited Understanding of AI, Data Security Concerns, Integration Issues, and Lack of Budget.

The recurring theme of "Limited Understanding of AI" as a primary challenge highlights the need for comprehensive AI education within organizations (Bewersdorff et al., 2023). This finding is consistent with industry reports emphasizing the importance of AI literacy among marketing professionals (Digital Marketing Association, 2021). Addressing this challenge through targeted training programs can empower teams to harness AI's potential effectively.

"Data Security Concerns" emerged as a significant challenge, indicating the apprehension surrounding the protection of sensitive information. This aligns with broader discussions on AI

ethics and the need for robust security measures in handling consumer data (Tene & Polonetsky, 2012). Organizations must prioritize the development of secure AI frameworks to mitigate potential risks and build trust with stakeholders.

"Integration Issues" were prominently cited, suggesting difficulties in seamlessly incorporating AI into existing digital marketing infrastructures. This finding resonates with the technical complexities often associated with integrating AI solutions (Fabian, 2022). Investing in interoperable technologies and collaborating with AI service providers can streamline the integration process. "Lack of Budget" emerged as a common obstacle, underscoring the financial constraints that organizations face in adopting AI technologies (Haenlein et al., 2020). While AI implementation can yield long-term benefits, organizations need to strategize budget allocations to accommodate the upfront costs of technology acquisition and training.

Count of What is the primary challenge your organization has faced in adopting AI for digital marketing?

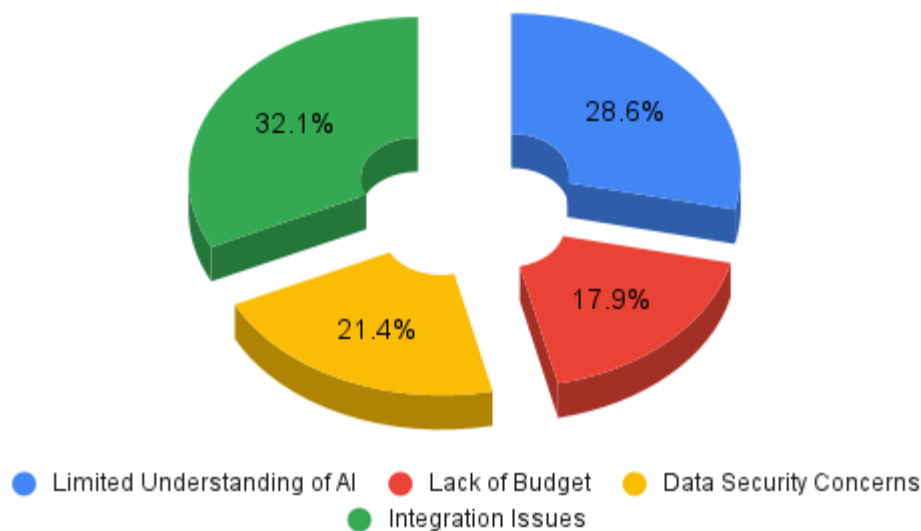


Figure 9 : Graph showing navigating challenges in AI adoption.

#### 4.3.7 Revealing AI influence in digital marketing : A Focus on Key Areas

The perceived effects of artificial intelligence (AI) on several facets of digital marketing are investigated in this study. Participants were asked to pinpoint the areas in which artificial intelligence (AI) has the biggest influence, which shed light on the perceived benefits of AI applications in the field of digital marketing. The most often mentioned domains where participants feel artificial intelligence (AI) has the biggest influence include chatbots and customer support, tailored marketing, predictive analytics, and content optimization. The prominence of "Chatbots and Customer Service" as the area with the most significant impact aligns with previous studies highlighting the transformative role of AI in automating customer interactions (Chen et al., 2021). AI-driven chatbots not only enhance the efficiency of customer service but also contribute to real-time support, thereby fostering improved user experiences.

"Personalized Marketing" emerges as another high-impact area, reflecting the growing emphasis on tailoring marketing strategies to individual preferences (Anderson et al., 2021). AI-driven personalization algorithms analyze user behavior, empowering marketers to deliver targeted and relevant content, ultimately enhancing customer engagement. The inclusion of "Predictive Analytics" underscores the power of AI in forecasting trends and consumer behavior (Chandra et al., 2022). Predictive analytics, facilitated by machine learning algorithms, enables marketers to make data-driven decisions, optimize campaigns, and anticipate market changes, contributing to overall marketing effectiveness. AI tools can analyze audience preferences, optimize content for search engines, and recommend personalized content, aiding marketers in creating more impactful and relevant digital assets.

These findings align with the broader industry discourse on the pivotal role of AI in automating routine tasks, facilitating data-driven decision-making, and enhancing overall marketing efficiency (Digital Marketing Insights, 2022).

Count of In which specific areas of digital marketing do you believe AI has the most significant impact?

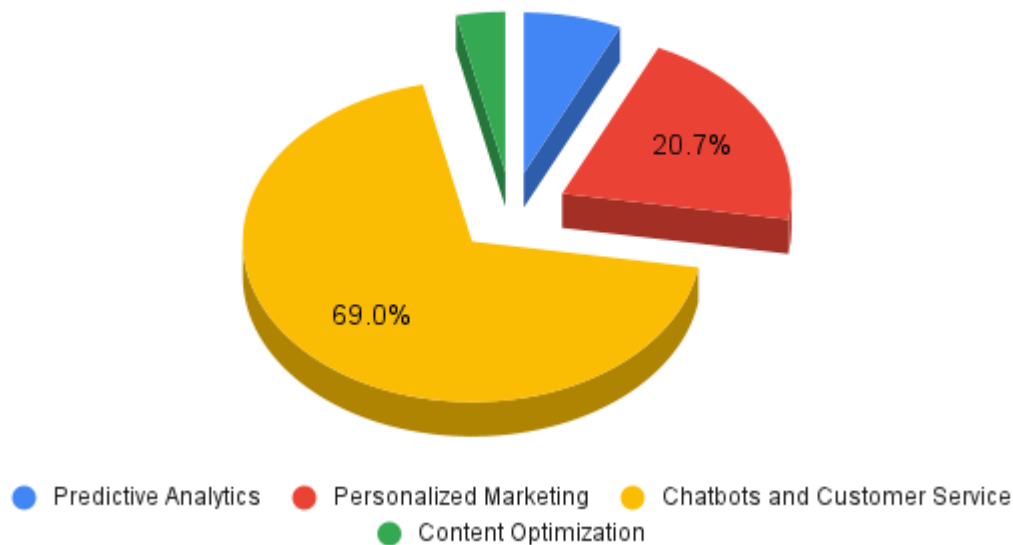


Figure 10: Graph showing the percentages of the key areas of digital marketing related to AI.

#### 4.3.8 Evolving Digital Marketing Strategies with AI Tools

Digital marketers using AI technologies demonstrate a range of applications; chatbots, machine learning algorithms, predictive analytics, and natural language processing (NLP) are among the tools that respondents employ. Combinations of chatbots, approximate analysis, machine learning algorithms, natural language processing (NLP), and machine learning algorithms are noteworthy. "Chatbot" ubiquity is consistent with automated consumer interactions' revolutionary position in contemporary digital marketing tactics (Chaurasia et al., 2023). Chatbots facilitate communication, improve customer service, and help to provide a more customized and interesting user experience.

"Predictive Analytics" stands out as a frequently adopted technology, underscoring the industry's emphasis on data-driven decision-making (Siegel, 2013). Predictive analytics empowers marketers to forecast trends, optimize campaigns, and elevate overall marketing effectiveness. The combination of "Chatbots; Predictive Analytics; Machine Learning Algorithms" reflects a comprehensive approach to AI adoption, aligning with studies highlighting the synergies between these technologies for more intelligent and responsive digital marketing strategies. Machine learning contributes to enhanced targeting and improved campaign performance. The

inclusion of "Natural Language Processing (NLP)" underscores the industry's commitment to understanding and responding to human language, a crucial aspect of chatbot functionality (Heikkilä, 2020). NLP enhances the conversational capabilities of chatbots, making interactions more natural and engaging.

***Count of Have you utilized any of the following AI tools or technologies in your digital marketing efforts? (Select all***

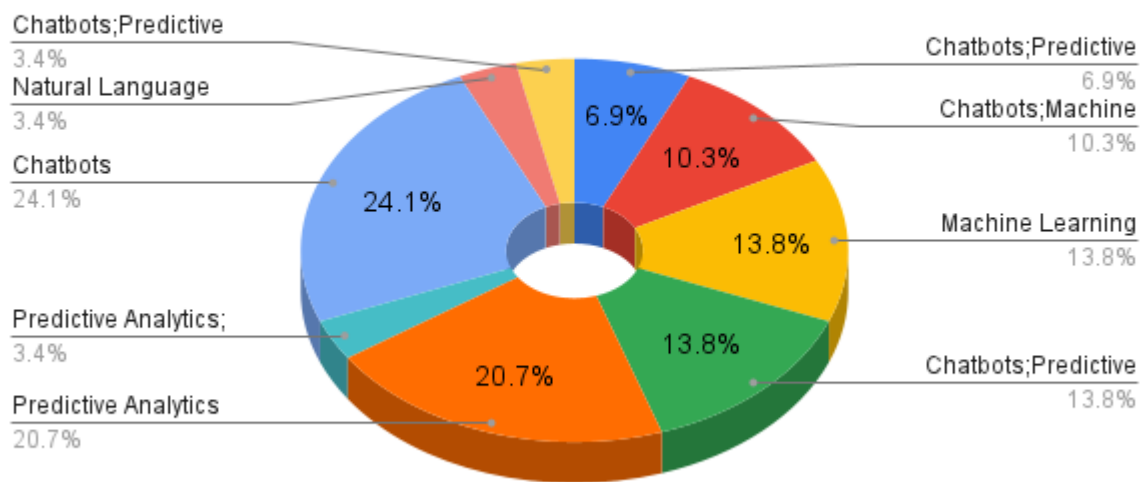


Figure 11: Graph showing the evolving of digital marketing strategies with AI tools.

#### 4.3.9 The Evolution of AI in Digital Marketing: A Future Outlook

This study looks at artificial intelligence's (AI) anticipated impact on digital marketing for the next three years. The respondents' expectations were disclosed, providing insight into the anticipated course of artificial intelligence's impact on marketing strategies. Comments on the role of AI in digital marketing indicate varying expectations: elevating it to a major position in all marketing plans, integrating it gradually, playing a complementary role, exerting a limited effect, and continuing to employ conventional methods. Various forecasts on the application of artificial intelligence (AI) in digital marketing over the next three years give rise to complex discussions about the direction the industry will take.

Respondents envisioning AI as "Becoming more central to all marketing strategies" align with a growing consensus on AI's transformative potential (Van Esch & Stewart, 2021). AI's capacity

for comprehensive data analysis, content personalization, and process automation positions it as a pivotal element shaping the core of future marketing strategies. This perspective recognizes AI as a valuable supporting tool rather than an immediate replacement for traditional methods, emphasizing a balanced approach to implementation.

On the other hand, those predicting "Limited impact, with traditional methods still prevailing" may reflect a cautious stance regarding the pace and effectiveness of AI adoption in the marketing landscape (Thilagavathy & Kumar, 2021). This viewpoint underscores the enduring efficacy of established marketing methods and raises questions about the industry's readiness for a more comprehensive integration of AI. The varied perspectives underscore the need for a nuanced understanding of AI's evolving role in digital marketing. While some foresee AI as a central driving force reshaping strategy, others advocate for a gradual and supplementary integration, and a subset remains cautious about the transformative impact of AI on traditional approaches. The key challenge lies in striking the right balance between AI integration and the preservation of effective traditional practices. The trajectory of AI in digital marketing will likely be shaped by a continuous dialogue and collaborative efforts to harness its potential while respecting the proven methods that have historically driven successful campaigns.

Count of How do you foresee the role of AI evolving in the field of digital marketing in the next 3 years?

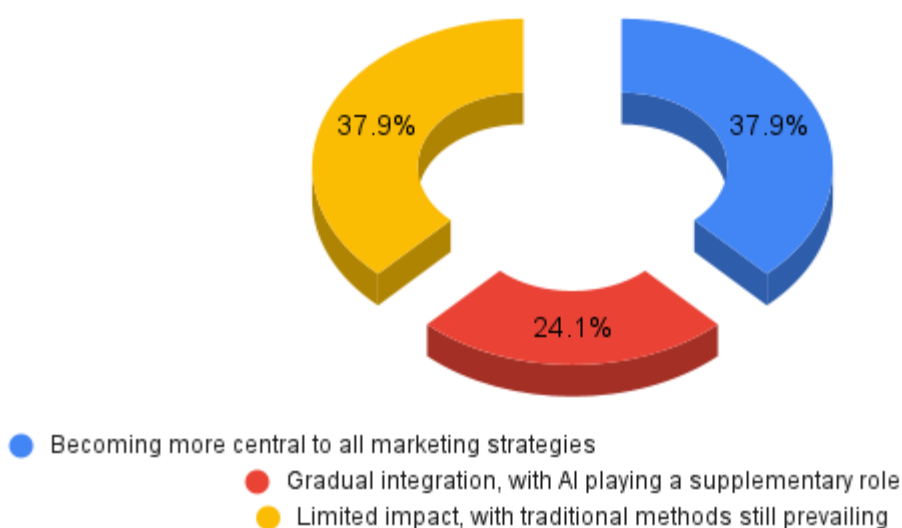


Figure 12: Graph showing the future outlook of AI in digital marketing.

## 5 Conclusion and recommendation

### 5.1 Summary

This thesis explores the application of artificial intelligence (AI) in digital marketing by examining customer perceptions, industry viewpoints, and real-world applications of AI technology. Two different groups of social media users, a random sample of professionals, and questionnaire surveys all provided insightful information for this comprehensive study. The main categories assessed participants' knowledge and comprehension of artificial intelligence (AI) in digital marketing, and the results showed that everyone was aware of AI's significance in this regard. As participants showed interest in using AI-powered digital marketing tools, ChatGPT became clear as a top option due to its versatility. As the investigation progressed, privacy and job displacement emerged as the main worries regarding AI in digital marketing. Simultaneously, research has revealed perceived advantages such as enhanced efficiency and customization. The study's focus was shifted to digital marketing professionals, and insights from marketing managers, SEO analysts, and digital marketing specialists were gathered. According to the statistics, most respondents had between three and five years of experience, which indicates that there is an opportunity for growth and a balance of abilities within the business. A substantial amount of study examines how AI is being used in digital marketing tactics, and the results show that 89% of companies have adopted AI. Problems with mainstream AI adoption have surfaced, including budgetary limits, data security worries, integration difficulties, and a lack of understanding of AI. Participants determined that chatbots and customer support, tailored marketing, predictive analytics, and content optimization are the areas where AI has the biggest influence. The adoption of AI technologies reflects a broad environment with a range of purposes. On the future, participants shared varying projections on artificial intelligence in digital marketing over the next three years. Some people think AI will play a bigger role in all marketing tactics, while others think it will only have a little or gradual influence. A thoughtful conversation about the industry's future direction is prompted by these differing expectations.

Through its exploration of the intricate world of artificial intelligence in digital marketing, this thesis was able to shed light on professional viewpoints, consumer views, adoption barriers, and future aspirations. The combined results add to a better knowledge of how AI is affecting digital marketing tactics both now and in the future. This investigation offers a useful starting point for current conversations and upcoming research initiatives as the sector develops.

## 5.2 Conclusions

In this comprehensive exploration of the role of Artificial Intelligence (AI) in digital marketing, our study harnessed data collected from two distinct groups: social media users and professionals in the digital marketing field. Through a questionnaire-based methodology, we delved into participants' familiarity, personal interactions, understanding, and perceptions regarding AI in digital marketing. The findings revealed a unanimous acknowledgment of AI familiarity among participants, demonstrating a widespread understanding of the significance of AI in the digital marketing landscape. Moreover, participants showcased a high level of personal interaction with AI-powered digital marketing tools, emphasizing the prevalence of AI adoption in real-world applications.

Two questionnaires, tailored for different respondent groups, offer a comprehensive view of AI in digital marketing. The social media user questionnaire captures individual perspectives, while the professional questionnaire provides an industry-wide lens. Together, they contribute to a nuanced understanding of the multifaceted landscape of AI integration in the digital marketing domain, encompassing user sentiments and industry practices.

Participants' self-assessed understanding of how AI is used in digital marketing reflected varying levels of perceived knowledge. While a majority rated themselves with high scores, indicating excellent understanding, some participants expressed limited comprehension, highlighting the need for ongoing education and awareness initiatives within the industry. The study also explored participants' beliefs in the affirmative regarding the potential of AI to elevate marketing practices. The discussion underscored the pivotal role of AI in personalization, where AI algorithms analyze vast datasets to understand individual customer preferences, behaviors, and demographics, contributing to more effective and targeted marketing strategies. Examining the utilization of AI-powered digital marketing tools, the data spotlighted ChatGPT as the predominant tool employed by participants. Its versatility in communication, content creation, and customer engagement positioned ChatGPT as a frontrunner in the digital marketing landscape. Privacy and job displacement emerged as primary concerns related to the use of AI in digital marketing. Participants expressed apprehensions about the collection, processing, and utilization of personal data, emphasizing the importance of ethical considerations in AI implementation. The study expanded its focus to explore consumer attitudes towards AI-driven personalization in marketing. The overwhelming positive response from participants indicated a strong inclination towards engaging with brands that utilize AI-driven personalization in their



marketing campaigns. In addition, the study investigated the perceived advantages of using AI in digital marketing. Participants highlighted effectiveness as a key advantage, emphasizing the ability of AI to enhance personalization, data-driven decision-making, and overall user experience. The examination of consumer comfort with brands using AI to collect and analyze personal data revealed unanimous comfort levels, suggesting a notable level of trust in the responsible use of AI technologies in marketing. Lastly, participants expressed overwhelming confidence in the effectiveness of AI-powered chatbots and virtual assistants in handling customer queries, highlighting the transformative potential of these technologies in customer service. This study provides a comprehensive overview of the multifaceted landscape of AI in digital marketing. The insights garnered from social media users and digital marketing professionals offer a nuanced understanding of the current state, challenges, and future expectations within the dynamic intersection of AI and digital marketing.

### **5.3 Obstacles**

Although this study offers insightful information on how AI specialists and non-expert staff view AI in digital marketing, it is important to recognize several limitations. The results may not be as broadly applicable as they may be due to the sample size and representation among AI professionals, which may not adequately reflect the variety of viewpoints among the larger AI community. Potential biases include the participants' geography and industry-specific focus and the possibility of response bias due to the use of self-reported data. Furthermore, a more quantitative and thorough analysis is hampered by the study's qualitative design and little examination of ethical issues. The insights' long-term applicability may be impacted by the study's chronological setting as well as the dynamic nature of digital marketing and artificial intelligence.

### **5.4 Potential avenues for future research**

A quantitative approach could complement the qualitative analysis, allowing for a more robust examination of patterns and trends. Further exploration of ethical considerations and potential biases in AI algorithms within the digital marketing context could deepen our understanding of responsible AI use. Additionally, comparative studies across various geographical regions and industries would contribute to a more comprehensive understanding of the global landscape of AI in digital marketing.

## 5.5 Recommendations

This thesis presents a comprehensive and insightful exploration of the role of Artificial Intelligence (AI) in the contemporary digital marketing landscape. The study's methodology, employing data collected from both social media users and random professionals through well-structured questionnaires, ensures a robust and diverse perspective. The thesis effectively addresses its objectives, providing valuable insights into participants' familiarity with AI in digital marketing. The unanimous acknowledgment of AI familiarity among participants reflects a widespread understanding of its role and significance in enhancing marketing strategies. The study's findings align with the current trend of growing integration of AI technologies in marketing practices, emphasizing its potential to enhance efficiency, precision, and overall campaign effectiveness. The exploration of participants' personal interaction with AI-powered digital marketing tools and platforms, along with their self-assessed understanding of AI, adds depth to the study. The nuanced responses, ranging from limited to high perceived understanding, contribute to a comprehensive understanding of participants' engagement with AI in digital marketing. The focus on ChatGPT, as the most commonly employed tool, brings practical relevance to the study. The consistent and repeated mention of ChatGPT indicates a high level of satisfaction and reliance on this specific tool, supported by its versatility and efficacy in various applications within digital marketing. The study effectively addresses concerns related to AI implementation, particularly privacy and job displacement, showcasing a thorough examination of potential consequences associated with AI in the marketing domain. Moreover, the incorporation of opinions from random professionals in the field of digital marketing adds a valuable layer to the study, providing additional insights into the positions most frequently mentioned and the distribution of years of experience among respondents.

The thesis concludes with a forward-looking perspective on the anticipated role of AI in digital marketing over the next three years. The diverse expectations prompt thoughtful discussions on the industry's future trajectory. In light of the study's depth, methodological rigor, and relevance to the evolving landscape of digital marketing, I highly recommend this thesis for academic consideration. The findings contribute significantly to the understanding of AI's impact on marketing practices and offer valuable insights for researchers, practitioners, and educators in the field.

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## 7 Appendix

### Appendix A

Interview Questions for social media user.

1. Are you familiar with the concept of artificial intelligence (AI) in digital marketing?
2. Have you personally interacted with any AI-powered digital marketing tools or platforms?
3. How would you rate your understanding of how AI is used in digital marketing, on a scale of 1 to 5 (with 1 being very poor, 2 for poor , 3 for average, 4 for good and 5 being excellent)?
4. Do you believe that AI has the potential to enhance the effectiveness of digital marketing strategies?
5. Which AI-powered digital marketing applications or tools have you found most?
6. What concerns, if any, do you have about the use of AI in digital marketing?
7. Would you be more likely to engage with a brand or company that utilizes AI-driven personalization in their marketing campaigns?
8. In your opinion, what are the key advantages of using AI in digital marketing?
9. How comfortable are you with brands using AI to collect and analyze your personal data to improve their marketing efforts?

Do you believe that AI-powered chatbots and virtual assistants can effectively handle customer queries and provide satisfactory responses?

## Appendix B

Interview Questions for different professionals.

1. What is your current position or title in the field of digital marketing?
2. How many years of experience do you have in digital marketing?
3. On a scale of 1 to 5, with 1 being "Limited Understanding" and 5 being "Expert Understanding," how would you rate your knowledge of AI in digital marketing?
4. Has your organization implemented any AI technologies in your digital marketing strategies?
5. In your opinion, what is the most significant benefit of integrating AI into digital marketing?
6. What is the primary challenge your organization has faced in adopting AI for digital marketing?
7. In which specific areas of digital marketing do you believe AI has the most significant impact?
8. Have you utilized any of the following AI tools or technologies in your digital marketing efforts? (Select all that apply)