

UNIVERSITY OF LJUBLJANA  
SCHOOL OF ECONOMICS AND BUSINESS

UNIVERSITY OF SARAJEVO  
SCHOOL OF ECONOMICS AND BUSINESS

**MASTER'S THESIS**

LAMIJA ZULČIĆ

UNIVERSITY OF LJUBLJANA  
SCHOOL OF ECONOMICS AND BUSINESS

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MASTER'S THESIS  
**ARTIFICIAL INTELLIGENCE AND DIGITAL MARKETING: THE  
ROLE OF CHATGPT**

Ljubljana, December 2023

LAMIJA ZULČIĆ

## AUTHORSHIP STATEMENT

The undersigned Lamija Zulčić, a student at the University of Ljubljana, School of Economics and Business, (hereinafter: SEB LU), author of this written final work of studies with the title "Title: Artificial intelligence and digital marketing: The role of ChatGPT (Umetna inteligenca in digitalno trženje: vloga ChatGPT)", prepared under the supervision of Associate: Professor Maja Arslanagić – Kalajdžić, PhD.

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## LIST OF ABBREVIATIONS

<b>AI</b> Artificial intelligence	<b>NLP</b> - Natural Language Processing
<b>CRM</b> - Customer relationship management	<b>PPC</b> -Pay Per Click
<b>DMP</b> - Data Management Platforms	<b>RFID</b> - radio-frequency identification
<b>IBM</b> - International Business Machines	<b>ROI</b> - Return on investment
<b>IDC</b> - International Data Corporation	<b>SEB LU</b> - School of Economics and Business
<b>IT</b> - Information technology	<b>SEO</b> - Search engine optimization
<b>MMS</b> - Multimedia Messaging Service	<b>SMS</b> - Short Message Service

# 1 INTRODUCTION

Over the past few decades, digital marketing, and marketing, in general, have undergone a significant transformation due to technological advancements and related changes in consumer behaviour. Artificial Intelligence (AI) has played a crucial role in this digital transformation by reshaping how businesses engage with their customers. One of the most promising applications of AI in digital marketing appeared only in late 2022 and represents the integration of conversational agents like ChatGPT, which can be related to employees' productivity and performance but also enhance customer communication and engagement. This thesis aims to explore the multifaceted role of ChatGPT in digital marketing strategies, focusing in particular on how AI-powered chatbots can provide personalized and real-time interactions with customers. Based on the GPT-3.5 and GPT-4 architecture developed by OpenAI, ChatGPT has demonstrated remarkable capabilities in generating human-like text and facilitating dynamic conversations. The study aims to investigate the benefits and challenges of incorporating ChatGPT into digital marketing campaigns and its potential implications on customer experiences.

Since the introduction of the term "Digital Marketing" in 1988, there has been a substantial surge in the business sector, encompassing both small startups and large corporations globally. The evolution of digital marketing from a solely data-driven approach to an innovative, knowledge-based decision-making system has been propelled by advancements in artificial intelligence (AI), data mining, and computational analysis (Casillas et.al, 2010).

The digital era has revolutionized the way industries operate, from branding, marketing, and advertising to production and distribution channels. Business managers can now make more informed and data-driven decisions by leveraging customer experiences and a digital snapshot of their operations and sales. As technology-savvy customers demand more, industries are forced to invest more money and resources into developing advanced products that meet their needs. Intelligent apps directly impact on the marketing world and decision-makers are becoming an increasingly popular choice for businesses. Intelligent data-driven models can help predict customer actions based on dependent variables of interest. Due to its increasing reliance on technology and online platforms, digital marketing plays a crucial role in today's marketing landscape. It enables businesses to reach a wider audience, engage with customers on various digital channels, and measure the effectiveness of their marketing efforts. Digital marketing provides numerous benefits, including expanded online presence, targeted messaging, personalized content distribution, and real-time analytics for optimized marketing strategies (Theodoridis & Gkikas, 2019). Using data-driven approaches, marketers can track the effectiveness of their campaigns, identify trends, and make informed decisions (Hoffman & Fodor, 2010). By leveraging tactics such as personalization, remarketing, and automation, businesses can improve customer engagement and satisfaction, creating long-term connections (Chaffey & Ellis-Chadwick, 2019). AI, data mining,

predictive modeling, and machine learning can help marketers identify strengths, weaknesses, opportunities, trends, and market demands, and better understand users and target audiences (Patel & Jain, 2012). The digital era has given customers a voice and the power of choice and influence. Brands can now communicate with customers in real-time, and users can search for information, products, or services with ease.

The American Marketing Association (2021) defines digital marketing as the use of digital channels and technology to promote products, services, and brands to specific audiences. It refers to a wide variety of methods and strategies that make use of online platforms such as websites, search engines, social media, email, mobile applications, and other digital mediums (American Marketing Association, 2021). The COVID-19 pandemic has had an enormous impact on the global economy, requiring firms to quickly adjust to the new reality of social distance and remote work (Chakraborty, 2021). The usage of digital marketing has increased as firms strive to reach customers where they spend the bulk of their time: online (Ahmed, 2020). Increased e-commerce and digital marketing use has also resulted in a larger transformation in how firms handle consumer involvement and sales (Götz et al., 2021).

In marketing, AI enables advanced data analysis, predictive modelling, personalized recommendations, chatbots, and automation, offering businesses opportunities to enhance customer experiences, optimize targeting and segmentation, streamline processes, and drive innovation (Smith, 2020.). Artificial intelligence (AI) is fast becoming more prevalent in today's digital world, and the marketing and advertising industries are no exception. Artificial intelligence is changing industries one by one, from the harsh and intelligent Siri to Tesla's self-driving cars to Google AI that can master video games in hours. Artificial intelligence applications range from recognizing trends in data to reduce market risks to improving customer service with virtual personal assistants and even analyzing millions of documents across a company's servers to uncover compliance flaws. However, organizations have only recently begun to predict and imagine the potential that artificial intelligence and robots will offer to the future of business. There are several uses of artificial intelligence in the consumer and corporate markets today, ranging from Apple's Siri to Google's DeepMind. The most popular AI tools that the public uses are voice assistance tools and Smart Home technology such as Siri and Amazon Alexa. There has been a lot of academic research on the usage of AI and its impacts on consumers and other stakeholders (Hosseini & Horbach, 2023). Siri, for example, interprets vocal instructions and responds accordingly using natural language processing (NLP). On the other hand, Google's DeepMind uses deep learning, which can make connections and derive meaning without depending on established behavioral algorithms. Instead, it learns from experience and utilizes raw data as inputs. Indeed, by implementing DeepMind insights, Google was able to enhance the efficiency of its data centres, lowering the energy consumed for cooling by 40%.

The authors Chui et al. (2018) discovered that marketing and sales, supply chain management, and manufacturing had the biggest influence on the potential value of AI usage

based on McKinsey & Company's examination of more than 400 AI use cases in 19 sectors and 9 business functions. Because frequent digital contacts between firms and consumers provide greater datasets for AI approaches, consumer industries such as retail and high-tech tend to perceive more promise in AI applications in marketing and sales. E-commerce platforms can benefit from AI because of the simplicity with which these platforms collect client information, such as click data or time spent on a website page, and can adapt promotions, prices, and items for each user (McKinsey & Co., 2018). The path to decision-making using artificial intelligence (AI) begins with data selection, continues with data pre-processing, and then data transformation and data mining play a crucial part in the entire process. Eventually, the assessment of the result will lead to decision-making (Copeland, 2023). AI differs from human intuition because it is data-driven. Commonly referred to as human intelligence processes by machines, AI can transform data into strategies that guide meaningful consumer behaviour (Haenlein & Kaplan, 2019). Higher customer satisfaction is more likely when businesses adopt digital marketing to influence consumer behavior (Ransbotham et al., 2017). The focus of AI in digital marketing is not based on replacing human dynamics in critical decisions but on developing a more robust dynamic digital marketing environment. It will allow advertisers to quickly assess the requirements of potential customers and adjust the AI they employ in digital marketing to increase sales (Campbell et al., 2020).

Chatbots, such as ChatGPT, may assist firms in streamlining their digital marketing efforts by automating specific duties, such as content generation. These chatbots can produce content customized to a company's brand voice and target audience by utilizing machine learning algorithms. This can help marketers save time and resources by automating time-consuming operations like writing product descriptions or creating social media posts. One of the primary benefits of using ChatGPT for digital marketing copywriting is its capacity to create enormous volumes of text rapidly and efficiently. This is especially beneficial for organizations that require a large volume of material regularly, such as e-commerce sites or social media influencers. Marketers can develop content at scale with chatbots like ChatGPT without losing quality or brand voice (Abdulaziz, 2021). As a result, some experts are concerned that the expanding use of chatbots could result in job losses for human copywriters (Fernandes, 2020). It should be noted, however, that chatbots are not intended to replace human copywriters. They are intended to supplement and assist their work. By automating some tasks, chatbots can free up time and resources for human copywriters to focus on more strategic and creative duties, such as drafting brand messages or developing added content ideas (Fernandes, 2020).

Furthermore, the use of chatbots in copywriting has the potential to open new job prospects in the digital marketing area. As more firms implement chatbots and other AI-powered technologies, there will be greater demand for people who can create and manage these systems. This might result in new career opportunities like AI content strategy and chatbot development (Abdulaziz, 2021). Marketers can save time and costs by automating these



procedures while still optimizing their websites for search (Huang et al., 2021). Chatbots can help organizations identify trends, opportunities, and areas for development by studying consumer behaviour and interaction data. This can help firms optimize and refine their marketing (Wu & Chen, 2021).

Another area where ChatGPT can make an enormous difference is campaign management in digital marketing. Chatbots can help organizations run more efficient and successful ad campaigns by automating operations like ad targeting, bidding, and placement. This can result in increased conversion rates, lower expenses, and improved ROI for digital marketing initiatives (Dutta & Banerjee, 2021). Existing literature acknowledges the benefits of AI technologies, including chatbots and conversational agents, in streamlining customer interactions and providing real-time assistance (Smith & Johnson, 2021.). Yet, despite these advancements, there remains limited empirical research and comprehensive insights into the optimal strategies for integrating ChatGPT specifically into digital marketing campaigns. Although ChatGPT demonstrates human-like language understanding and generation, it also poses the risk of producing content that deviates from brand identity or user expectations (Davis, 2021).

In addition, the interaction dynamics between ChatGPT and consumers introduce ethical considerations, such as transparency about AI involvement and the potential for bias in responses (Carter & Johnson, 2019). These factors underscore the necessity for empirical research that not only unveils the opportunities that ChatGPT presents but also addresses the challenges and ethical considerations that marketers must navigate when integrating AI into marketing communication. To address this knowledge gap, this research seeks to examine the integration of ChatGPT into digital marketing strategies comprehensively. By investigating its impact on customer interactions, content creation, and marketing outcomes, this study aims to provide practical insights for marketers and shed light on the optimal strategies for leveraging ChatGPT's capabilities while ensuring meaningful customer engagement and ethical considerations are upheld.

The purpose of this thesis is to examine the role of AI, specifically the recently developed ChatGPT, in digital marketing. AI and ChatGPT have revolutionized how firms approach marketing in recent years, providing more customized, focused, and effective marketing techniques. As these technologies progress rapidly, it is becoming increasingly vital for organizations to grasp the consequences of marketing tactics.

Within this master's thesis, the following research questions will be empirically examined to gain better insight:

- RQ1: Does ChatGPT improve operational efficiency in digital marketing?
- RQ2: What are the primary differences and challenges faced by individuals when integrating AI into their everyday tasks compared to traditional research methods?
- RQ3: How does ChatGPT's use in business impact job opportunities in copywriting,

ad brainstorming, and demographic research for targeting potential buyers?

- RQ4: What are the crucial factors associated with using ChatGPT in digital marketing?

One of the main goals of this thesis is to study how AI and Chat GPT are utilized in digital marketing and what benefits they provide to organizations. The goal of this research is to understand the present state of AI in marketing by studying how AI currently affects marketing and how it will impact Marketing in the future.

To respond to the research questions posed and contribute to filling the research gap and resolving the defined problem, the objectives of this master's thesis are as follows:

- to investigate ChatGPT usage in digital marketing and its improvement of operational efficiency;
- to identify which knowledge and information spectrum ChatGPT has and whether it is relevant to the given matter;
- to identify which segments of job positions DM can be replaced entirely/partially by ChatGPT;
- to predict future changes and expectations of the ChatGPT development and its effect on human beings.

This thesis is an exploratory and descriptive investigation of a single subject. The approach used to support the research is qualitative and, most importantly, descriptive. Based on the backdrop of AI tools used in marketing provided in the preceding paragraphs, this research conducted an analysis centered on the perspective of individuals who work in the digital marketing department and specifically with AI. The first part of the study provided the theoretical underpinnings based on secondary information from scholarly articles, journals, reports, and books. In the second part, the primary data collection was performed to be analyzed together with the theoretical bases.

A literature review would be the initial stage in selecting the technique for the master thesis. This will entail a thorough examination of existing studies on the application of AI and Chat GPT in digital marketing. The literature study will offer an overview of the current understanding of the issue and aid in identifying gaps that need to be filled. This review will enable us to identify the main theories, definitions, and conceptualizations of constructs of interest. It will further enable the development of the framework for primary research.

A qualitative approach will be used as the major research method for this master thesis to obtain answers to questions generated during the pre-empirical phase and descriptive data on the impact of AI. Creswell and Poth (2017) define qualitative research as having many crucial qualities. For example, it emphasizes individuals' subjective experiences and viewpoints on a specific issue. Second, it is exploratory in personality, with the goal of

discovering new insights and ideas. Third, it is inductive, which means that it aims to construct hypotheses and explanations based on the evidence gathered. Fourth, it employs a versatile research design that enables modification to the study situation.

In the context of this master's thesis, qualitative research will be focused on digital marketing employees, both using and not using AI in their work. Surveys, interviews, case studies, and observational research may be used. The right sampling strategies should also be considered in the thesis to guarantee that the sample population represents the target population. In this thesis 1/1 surveys will be conducted.

To obtain the necessary data for qualitative research, ten workers from one company's various digital marketing departments (search, analytics, campaign management, social, etc.) will be interviewed in-depth. These ten interviews will be conducted in a methodical manner to determine how AI affects their department and how it affects DM generally. To ensure validation, it is critical to assure the quality and dependability of data during the data collecting and analysis process.

The last phase in the process is to arrange and organize the data from the interviews to analyze the results. After gathering the appropriate information, the analysis will be conducted utilizing qualitative data analysis techniques such as content analysis and organizing and presentation of results through cross-case matrices, the meta-matrix approach, labelling, and constant comparison (Huberman & Miles, 1994). The method of analysis will culminate with an overview of findings and potential research limits, followed by a debate and ideas for future AI applications.

The structure of the thesis consists of four pivotal chapters that systematically delve into the intricate topic of "Title: Artificial intelligence and digital marketing: The role of ChatGPT (Umetna inteligenca in digitalno trženje: vloga ChatGPT)." The first chapter embarks on a comprehensive journey by elucidating the profound interplay between technological advancements and the expansive digital marketing landscape. This exploration encompasses a historical overview of the evolution of artificial intelligence (AI) and its influence on the global digital marketing sector, contextualizing the significance of the ChatGPT framework.

Moving seamlessly into the second chapter, the lens shifts towards an intricate analysis of the core components of AI-powered customer engagement within digital marketing. This chapter delves into the multifaceted definition of ChatGPT, intricately unpacking its elements and functionalities that facilitate unparalleled customer interactions. Moreover, the chapter critically dissects the pivotal role ChatGPT plays in shaping the customer experience landscape, revolutionizing communication strategies and augmenting brand-consumer relationships.

Chapter three aptly aligns with the thesis's trajectory, honing in on the strategic integration of ChatGPT within the digital marketing sector. The focal point of this chapter centers around real-world applications and case studies that showcase the tangible impact of ChatGPT on various dimensions of digital marketing. This exploration traverses diverse industries and sectors, underscoring how ChatGPT's implementation catalyzes personalized campaigns, data-driven insights, and unprecedented customer engagement. In its final strides, the fourth chapter draws the threads together, meticulously analyzing the empirical results and implications of ChatGPT's integration into digital marketing strategies. This chapter encapsulates the culmination of research findings, encapsulating the perspectives of stakeholders and consumers alike. Insights gleaned from this data-rich analysis shed light on the effectiveness, challenges, and potential future trajectories of ChatGPT in reshaping the digital marketing landscape.

In summary the thesis intricately navigates the confluence of artificial intelligence and the digital marketing sector through the prism of ChatGPT. By progressively exploring the evolution, role, integration, and real-world impact of this transformative technology, the thesis not only contributes to the scholarly discourse but also offers actionable insights that can empower businesses to harness the full potential of ChatGPT for enhanced customer engagement and brand success in the dynamic digital realm.

## **2 DIGITAL MARKETING**

### **2.1 Understanding Digital marketing**

The term "digital marketing" refers to the process of advertising products and services using digital channels, such as search engines, social media platforms, mobile apps, websites, and other outlets. When the internet first went live in the 1990s, digital marketing started to gain popularity. Businesses usually blend traditional and digital marketing methods in their marketing initiatives and goals. Similar ideas underlie both traditional and digital marketing, which is widely seen as a new approach for companies to interact with customers and learn more about their behavior. Businesses used to advertise their products on radio, television, and print media. While these choices are still available today, business-customer interactions have changed as a result of the growth of the Internet. Digital marketing can assist with that since it combines advertising and client feedback, creating a two-way dialogue between the customer and the business (Baron, 2022). With flexible procedures and the use of digital technologies, new types of value can be created in a variety of digital environments. Businesses that use digital technology acquire the skills needed to work together to achieve outcomes that are beneficial to all parties involved, including their consumers and themselves. Digital process adoption offers new customer experiences and facilitates customer interactions in addition to adding value to the organization. The adaptable digital touchpoints that span marketing activities, institutions, processes, and customers are critical to the success of digital marketing. Interactions are rising at a substantial pace of more than

20% per year as offline clients switch to digital technologies and younger, tech-savvy customers enter the market. To understand the critical role of artificial intelligence in digital marketing research and planning, we must first assess the status of scientific inquiry and its relationship to the commercial sector. This will help us to identify whether digital marketing research is keeping up with corporate business improvements (Bughin, 2015).

Sawicki (2016) underscores the significance of digital marketing in enabling companies to deliver personalized content to specific recipients. Personalized content creation relies on various factors, including data sourced from CRM databases. Effective customer relationship management can yield substantial data on consumer preferences, which can then be harnessed in crafting products or services tailored to specific consumer segments. Digital marketing encompasses the adept management and exploitation of the 5Ds: digital devices, digital platforms, digital media, digital data, and digital technology (Kotane et al., 2019). In recent years, the digital landscape has witnessed the prominence of artificial intelligence. The rapid advancements in artificial intelligence and machine learning have significantly enhanced the capabilities of artificial intelligence, enabling it to adapt to diverse requirements. This development has marked a pivotal moment in technology and the field of digital marketing (Kotane et al., 2019). Considering the aforementioned aspects, a central feature of digital marketing lies in harnessing an array of contemporary digital channels to reach target audiences efficiently, reduce costs, and facilitate more precise result measurement. Concurrently, digital marketing endeavors to provide personalized content to its audience.

## **2.2 A shift of Marketing from Traditional to Digital**

Traditional marketing is a well-known form of promoting products or services without the use of digital channels. In contrast, digital marketing uses various digital channels to reach consumers and promote products or services. It is important to note the differences between these two marketing methods and determine which approach is best suited for the business entity's goals and target audience. Digital marketing and traditional marketing are two distinct approaches to promoting products or services, each with their unique characteristics, advantages, and limitations. Digital Marketing encompasses a wide range of strategies and channels that leverage the internet and digital technologies to reach target audiences (Smith, 2020). This approach offers several notable advantages which will be elaborated further:

Precise Targeting in digital marketing allows for highly precise audience targeting. Marketers can tailor their campaigns based on factors such as age, gender, location, interests, and online behaviour (Brown, 2019). This level of granularity ensures that messages reach the most relevant individuals. Measurable Results are important in digital marketing provides robust analytics tools that enable marketers to track the performance of their campaigns in real-time. Metrics like website traffic, click-through rates, conversion rates, and return on investment (ROI) are readily available (Jones & Lee, 2018). This data-driven

approach allows for ongoing optimization and better decision-making. Cost-Effectiveness is another advantage, many digital marketing strategies, such as pay-per-click advertising, email marketing, and social media advertising, can be cost-effective compared to traditional methods. Advertisers can set budgets and bid strategies to control spending (Johnson, 2021).

However, digital marketing also has its challenges. The digital landscape is highly competitive, and standing out amidst the noise can be difficult. Advertisers must continually adapt to evolving algorithms, consumer behaviors, and platforms. Traditional Marketing, in contrast, refers to traditional advertising channels such as television, radio, print media, billboards, direct mail, and in-person events (Wilson, 2019). While this approach may lack some of the precision and measurability of digital marketing, it offers its own set of advantages:

Table 1: Advantages of traditional marketing

Wide Reach	Tangibility	Local Impact
Traditional marketing channels can reach a broad audience, making them effective for brand awareness campaigns (Smith, 2020). Television, for example, has the potential to reach millions of viewers.	Print materials, such as brochures or direct mail, provide a physical presence that digital media cannot <i>replicate</i> (Brown, 2019). Tangible materials can leave a lasting impression on consumers.	Traditional marketing can be particularly effective for local businesses looking to target a specific geographic area (Jones & Lee, 2018). Local radio or billboards can attract customers in a particular region.

*Source: Knowledge Academy (2023).*

Despite these benefits, traditional marketing faces challenges in terms of tracking ROI and adapting to changing consumer preferences. It can also be more expensive, especially for national or international campaigns. In practice, many successful marketing strategies combine elements of both digital and traditional marketing to create a holistic approach. This approach, known as integrated marketing, leverages the strengths of each method to maximize impact (Wilson, 2019). The choice between digital and traditional marketing should be based on the specific goals of the campaign, the target audience, and the available budget, as can be seen in the table below:

Table 2: Traditional marketing and digital marketing comparison

<b>Traditional Marketing</b>	<b>Digital Marketing</b>
Print, television, direct mail, and telephone marketing are all examples of traditional marketing	Online advertising, email marketing, social networking, text messaging, affiliate marketing, search engine optimization, and pay per click are all examples of digital marketing
No interaction with the audience Interaction with the audience	Interaction with the audience
Results are easy to measure	Results are to a great extent easy to measure
Advertising campaigns are planned over a long period of time	Advertising campaigns are planned over a short time frame.
Expensive and time-consuming process	Reasonably cheap and rapid way to promote the products
Traditional marketing strategies can be considered successful if the company can reach a large local audience	The success of digital marketing strategies can be celebrated if the company is able to reach a certain number of local audiences
One campaign prevails for a long time	Campaigns can be easily changed with ease and innovations can be introduced within any campaign
Limited reach to the customer due to limited number of customer technology	Wider reach to the customer because of the use of various customers technology
No ability to go viral	Ability to go viral
One way conversation	Two ways conversation
Responses can only occur during work hours	Response or feedback can occur anytime
24/7 year-round exposure is not possible	24/7 year-round exposure is possible

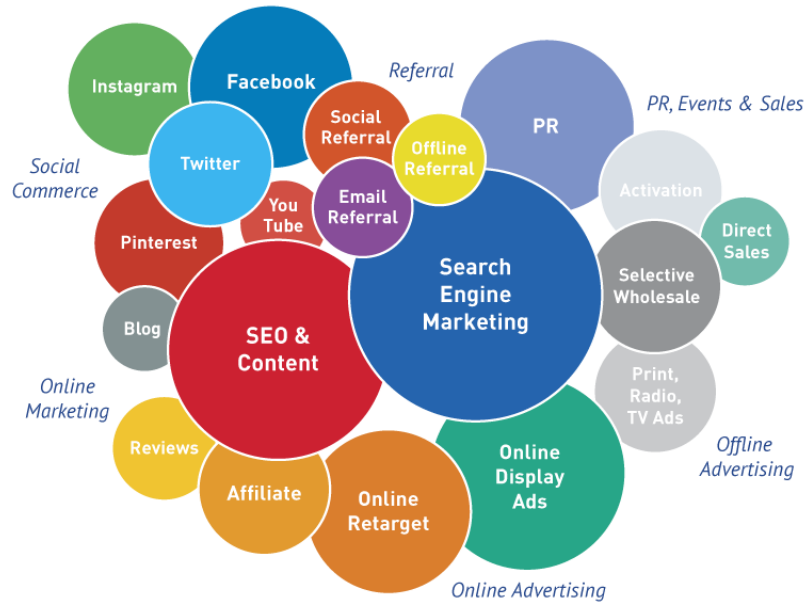
*Source: Knowledge Academy (2023).*

## 2.3 Trends and Channels in Digital Marketing

Businesses used to place advertising in periodicals or on billboards, hoping that the right person would see them. The majority of marketing is now done digitally. Given how much time people spend online, it appears logical. This means that businesses have virtually endless opportunities to connect clients through digital marketing. However, because the internet is so vast and used for so many different purposes, a plethora of digital marketing channels have emerged throughout time. As a result, digital marketers must decide which digital marketing channels will be most effective in reaching their target customers. Search engine marketing (SEM), social networks, smartphone applications, and other platforms fall under the banner of digital marketing. They help with brand awareness, building trust and

credibility, and generating sales, all those channels can be seen in the picture below.

*Figure 1: Fundamentals of Digital Marketing*



*Source: Bacchus (2023).*

### 2.3.1 Online advertising

Online advertising is an essential part of digital marketing. It is also known as online advertising, and it allows a corporation to send a message about its products or services. Internet advertising gives the most relevant information and advertisements to consumers' interests. Publishers place information about their products or services on their websites in order to provide free information to consumers or users. Advertisers should use more effective and relevant internet advertising. A corporation may keep its money under control and its time under control by using internet advertising.

#### 2.3.1.1 Search Engine Optimization (SEO)

Search engine optimization (SEO) is the process of affecting the visibility of a website or a web page in a search engine's natural or un-paid "organic" search results. The sooner (or higher placed on the search results page) and more frequently a website appears in the search result list, the more traffic it will receive from search engine users. SEO may target several types of searches, such as picture searches, local searches, video searches, academic searches, news searches, and industry-specific vertical search engines. The effort of developing a website that ranks highly for keyword phrases in organic search results while simultaneously increasing the volume and quality of website visitors to a particular site may also be referred to as SEO (Iskandar & Komara, 2018). Sharma & Verma (2020) advise a



website's user-friendliness, distinctive content, and a well-described meta description in order to improve search engine ranks and attract more relevant visitors. Additionally, people spend more time reading material on a website that has more substantial content, which extends their stay on the page. This effect increases the likelihood that the website will rank higher in search results (Kaukoranta, 2015).

#### *2.3.1.2 Pay Per Click (PPC)*

Pay-per-click marketing is a method of generating clicks to your website through search engine advertising rather than learning those clicks naturally. Pay per click is beneficial to both searchers and marketers. It is the ideal option for companies to advertise since it is low-cost and increases interaction with their products and services. When you need results immediately, paid adverts are ideal. Paid media campaigns, unlike content marketing and SEO, may be launched quickly. Keeping this in mind, PPC is a good alternative for launching a new product or running a short-term campaign. It's also handy for testing because you can quickly validate concepts. However, due to the high cost, PPC advertising is a bad choice at the top or center of the buying funnel. If you carefully integrate PPC and SEO, you can dominate client attention in Google or Bing.

#### *2.3.2 Email Marketing*

Email marketing can be defined as sending a message about items or services to existing or potential customers via email. Direct digital marketing is used to send advertisements, establish brand and customer loyalty, consumer trust, and brand recognition. A corporation may readily promote its products and services by utilizing this aspect of digital marketing. It is less expensive than advertising or other types of media exposure. By designing an appealing mix of visuals, text, and links on the products and services, the corporation can capture the customer's full attention. Email marketing is one of the earliest forms of digital marketing, it remains one of the most lucrative. According to a Litmus survey conducted in 2019, a dollar invested in email marketing generates nearly forty dollars in return on investment (Ward, 2019). According to Sterne (2017), emails are written for a variety of purposes, including sending a gratitude note to a new customer, developing a relationship, or advertising.

AI technologies allow for an evaluation of which sorts of emails work best in terms of creating the most value for a business. Zeta Global (2019) offers an artificial intelligence (AI) solution that allows marketers to spend less time creating email content and more time cultivating ongoing interactions with clients. Predictive intelligence is used by the organization to obtain a more personal understanding of each consumer, allowing marketers to pick the best time, establish segmentation, and estimate the value of content for each client. Chowhound took advantage of this chance to strengthen its business and saw a nearly

30% increase in email open rates and a nearly 150% increase in email hits (Sterne, 2017). Sterne (2017) asserts that AI is capable of determining the optimal timing for email addresses, the days emails are more likely to be read, suggesting relevant content, design, offering the favored imagery of a customer, the colors a client prefers, and so forth. According to Sterne, the majority of the jobs stated might be accomplished by marketing professionals. Regardless, the time spent on these responsibilities would be useless. As a result, the AI is a fantastic buy. Additionally, AI may help marketers increase sales by personalizing email promotions. Algorithms can recognize trends that indicate which offers inspire customers to buy from a company (Brenner, 2019). For some customers, the thought of free delivery is enough to entice them to purchase a product or service; for others, it may be a 20% discount on a certain piece of furniture or technology.

### 2.3.3 Social Media

Today, one of the most essential digital marketing platforms is social media marketing. It is a computer-based application that lets users create, share, and exchange ideas, information, and images related to the company's products or services. Facebook, Twitter, LinkedIn, and Google+ are popular platforms used to increase brand recognition and visibility. Studies show that close relationships are important for consumer referral behaviors. (Verlegh et al., 2013).

Second, social media has altered the way businesses and customers interact and influence one another. Social interaction includes "activities" that influence other people's decisions and consumer habits, whether through speech or passive observation (Wang et al., 2011). (Manchada et al, 2010) used the term "word-of-mouth (WOM) effects" to describe such social encounters. Human connections, according to Muller and Peres (2019), rely largely on social networks and provide quantifiable value to businesses. Experts in media research have widely acknowledged the importance of social effect in influencing consumer decisions, and recent studies have shown that people's connection patterns and the degree of social ties may reflect the level of social interactions (Zubcseck et al., 2011).

Third, the availability of social media data has made it far simpler for firms to manage customer interactions more efficiently and make better business decisions (Bolton et al., 2010). The 3Vs (volume, variation, and velocity) of social media data are often used to explain the vast amount of data, the numerous data sources, and the extended real-time data (Bowman et al., 2017). A huge quantity of social media data may now be obtained and productively employed using contemporary information technologies from a range of sources on the web and in a variety of formats such as text, photos, and video (Moe & Schweidel, 2017). Thus, this type of data can be a valuable source for customer analysis, market research, and developing new innovative ideas, while extracting and creating new strategic resources capable of improving marketing outcomes.

#### 2.3.4 Text Messaging

It is a method of transmitting product and service information from cellular and smart phone devices. The firm may deliver information in the form of text (SMS), photos, video, or audio (MMS) utilizing phone devices. Marketing via cellphone SMS (Short Message Service) became more popular in Europe and certain areas of Asia in the early 2000s. Text messages may be used to provide order confirmations and shipment warnings. SMS marketing produces faster and more significant outcomes. Companies may use this technology to deliver marketing messages to their consumers in real-time, at any moment, and be certain that the message will be viewed. A company might build a questionnaire to get useful client input for future product or service development.

#### 2.3.5 Affiliate Marketing

Affiliate marketing is a type of performance-based marketing. In this sort of marketing, a corporation compensates affiliates for each visitor or client they bring to the company through marketing efforts they generate on its behalf. The merchant, also known as the store or brand, the network, the publisher, sometimes known as the affiliate, and the client are the four main actors in the industry. As the industry has expanded in complexity, a secondary tier of companies has emerged, including affiliate management agencies, super-affiliates, and specialized third party suppliers. There are two approaches to affiliate marketing: the company can provide an affiliate program to others or join up to be an affiliate for another company. If a firm wishes to run an affiliate program, the owner must pay affiliates a commission rate for each lead or sale they bring to the company's website. The primary purpose of the company here is to locate affiliates who can reach unexplored markets. A firm having an e-zine, for example, may be an excellent affiliate since its users are eager for resources. As a result, offering one's offer through a trustworthy organization can capture the attention of prospects who would not have otherwise been contacted. The act of creating and delivering suitable, useful brand-related material to present or future consumers, as well as other target groups, via online or print media is referred to as "content marketing" (Hollebeek & Macky, 2019). Content marketing focuses on adding utility to target audiences' lives, such as by teaching them, assisting them in solving problems, delighting them, or assisting them in making informed decisions (Wall & Spinuzzi, 2018). This is in contrast to conventional advertising, which is typically defined as a form of communication intended to convince or even force target audiences to take some action, either now or in the future (Dahlen & Rosengren, 2016).

According to the social exchange theoretical concept, an organization that distributes relevant content to a target audience would be rewarded by the group in exchange for favorable attitudes. Since more than half of content consumers ignore inappropriate information, marketers that want to succeed with content marketing need to be creative and original in their content generation. According to IBM research, slightly over 70% of

businesses offer their clients a wide choice of objective and helpful information (Synovec, 2019). Fortunately, statistics exist to assist us in this case. Data enables the personalization and enjoyment of material (Smilansky, 2018). Using data, for instance, to make recommendations for goods and services based on prior purchases. Now, content recommendations can be made using data that has gathered over time (Sterne, 2017). Each person has a distinctive set of tastes and interests. This information can be used to build social media adverts or emails that are specifically catered to each user's tastes. Therefore, employing intelligent content formulation made feasible by AI, marketing goals can be attained (Ellis-Chadwick & Chaffey, 2019). The power of AI-assisted content production is larger than it appears. It takes a lot of time and money to create helpful content for a variety of goods and services. Alibaba is one of the companies that has developed AI technology that can produce millions of lines of text and swiftly write 20,000 lines of ads. As a result, their shops may create content without requiring human involvement (Mark J, 2019). The tool, developed as part of Alibaba's digital marketing division Alimama, aims to relieve retailers' laborious and time-consuming task of writing copy for product listings by extracting "millions" of real human sentences from the company's e-commerce platforms and interpreting them using deep learning models and natural language processing.

## **2.4 The Future of Digital Marketing**

Trends in digital marketing are ever-changing and dynamic. Right now, streaming services are having a significant effect on the market. Marketers will soon be enhancing their approaches in order to attract a larger audience. Companies who don't adapt will miss out on chances to gain from (TechToday, 2018). More trends favoring the use of digital marketing in online marketing will emerge as it develops, with brand videos being the most effective. Social media, particularly when used with video content, is one of the best venues for developing accessible, low-cost client engagement spaces. Videos with intriguing stories, demonstrations of items, and leadership may boost a brand's credibility. Attracting customers quickly enough to grab their attention is the next major task facing digital marketers. Due to the short attention span of consumers, a lot of videos are teasers, trailers, and brief content (Vaknin, 2018). For businesses to improve their marketing approach, they need to start investing in blockchain technologies. Blockchain technology enables micropayments to be transferred straight to consumers' wallets when they interact with promotional emails and videos. Through the integration of blockchain technology, businesses may expand their audience reach and connect in new ways. It is projected that by 2021, publishers would lose 40 billion dollars as a result of endorsements being blocked by advertising. Furthermore, customers are compensated by marketers for their attention, and the Facebook and Google layer is excluded, allowing marketers to take a cut of the revenue using a range of tactics made possible by blockchain technology (Vaknin, 2018).

More businesses are starting to include visual search into their websites and mobile applications as technology develops. This is a huge chance, particularly for internet retailers. Future developments in visual search technology may change how people browse, and retailers will need to adapt to stay competitive. Retailers of technology will therefore be able to personalize client experiences and assess visuals, forms, and hues to provide more customized material (Inkbot, 2019). Future challenges for digital marketing will center on protecting customer data privacy. There will inevitably be more legislation in the works to tighten the obligation of user data. Digital marketing will likely be impacted by this, as marketers need to follow the rules to succeed. Privacy laws such as the CCPA, GDPR, and others have made consumers more aware of how businesses use and share their data, which will raise serious concerns about safety and security (Vaknin, 2018).

### **3 ARTIFICIAL INTELLIGENCES (AI)**

#### **3.1 Artificial Intelligence in general**

Artificial intelligence is the process of transferring human intellect to machines. Alan Turing developed the famous Turing Test and pushed for the investigation of machine intelligence in the 1950s, which marked the beginning of extensive AI research. The phrase artificial intelligence was originally used in 1955 by Turing and John McCarthy, who headed the 1956 Dartmouth Summer Research Project on Artificial Intelligence (Turing, 1950). Professor John McCarthy of Dartmouth College of mathematics is credited with coining the phrase "artificial intelligence". McCarthy headed an organization that applied to hold an AI conference. Due to this, a number of the top scientists at the time were invited to the 1956 symposium at Dartmouth Hall. Researchers talked about a wide range of possible topics for artificial intelligence study, such as games (particularly chess), human-machine interaction with intelligent robots, learning and searching, vision, logic, language, and cognition. They offered a broad framework for the fields of study that machine intelligence may influence. At the meeting, the Logic Theorist, Cliff Shaw, Allan Newell, and Herbert Simon, presented the first artificial intelligence program. Constructed in 1955/1956, the Logic Theorist was intended to resolve issues that were normally resolved by people. The overall conclusion played a crucial role in the research of artificial intelligence as we know it today since most participants at the time agreed that artificial intelligence could be achieved. A few years later, in 1958, John McCarthy created the programming language LISP, which played a significant role in the development of artificial intelligence and machine learning.

"That of making a machine behave in ways that would be called smart if a human were doing so" (McCarthy et al., 1955) is one of the problems they claim exist with AI. Artificial intelligence (AI) has a significant positive influence on many processes and services worldwide. Wichert (2020) investigates the use of quantum computing and machine learning in artificial intelligence. It makes difficult situations easier to resolve quickly. The volume and complexity of data is expanding too rapidly for humans to process effectively (Wichert,

2020). Machine learning has made it possible and faster for people to address linked problems that they often find difficult or impossible to solve quickly. Quantum computing, which can provide answers to issues in a matter of seconds, simplifies work (Wichert, 2020). Wichert claims that advances in quantum information systems need machine learning in artificial intelligence. The advantages will increase even in the event that a complete quantum computing solution is not found.

Recent advances and applications in artificial intelligence are examined by Pujol in their article "Artificial Intelligence Research and Development" (Pujol et al. 2014). Just a few examples of regularly recurring advancements in artificial intelligence are Deepfake, "Robot Hand Dexterity, AI-Generated Synthetic Text, Upside Down Reinforcement Learning, Three-Body Problem Solving, and Expandable Artificial Intelligence." Robots with expertise are used in a project named Robot Hand's Dexterity to solve challenging issues. In 10 simulated scenarios, they gain knowledge on how to successfully transfer information into a new environment. Marketing professionals may focus their attention on the most qualified leads and save time on the less qualified prospects by using programs that offer precise information on which leads have the highest likelihood of converting. It also enables the item to be customized. Finding possible consumers requires, among other things, utilizing data on their geography, demographics, and previous purchases. Monitoring and customer data pertaining to the physical items are also included. For example, IBM Watson was used by Under Armour to combine their own client data with third-party data to produce "Record," a tailored health and fitness tracking program (Tanveer et al., 2021).

Customizing relevant messages for clients is made feasible by AI, as Hermann (2021) points out in his paper. Predictive analysis is a useful tool for businesses to better understand the interests of their customers and provide recommendations accordingly. Both Netflix and Amazon utilize this to suggest TV series and merchandise. It is quite useful for marketers to compile a database of informative points that allows them to lead clients toward a certain product or service. Thanks to AI, people can solve their difficulties with ease. Furthermore, as 85% of customer interactions will occur without human participation, it is a cost-saving approach (Hermann, 2021). Since the dawn of time, some computer scientists have attempted to build machines with human-level intelligence. A few of the most well-known artificial intelligence (AI) systems are shown and discussed in the chronology that follows. The capabilities of AI systems have increased recently to even more astounding levels. Early systems focused on producing images of faces, but these later models extended their capabilities to generate images from words in answer to almost any query.

### **3.2 Advantage and disadvantage of AI in digital marketing**

AI grows smarter with each interaction with a client. People, in theory, do it as well; yet it is not unusual for someone to acquire a valuable lesson each time they speak with a customer. AI enables marketers to decrease manual labor and efficiently customize decisions on a level

to improve targeting. Machines are more efficient than humans because they can operate around the clock, do not sleep, do not require breaks, and do not become bored. As a result, we can rely on them right now, even in the middle of the night, for information on key events, or to talk with clients at any time of day.

AI can handle enormous quantities of data in the blink of an eye, a task that would take hours of human labor or is not even possible. AI, unlike industrial-era computers, automatically automates repetitive tasks. AI systems require a brief moment to make an informed conclusion, but humans take longer time. Businesses may save money on otherwise expensive business operations by automating the process, decreasing mistakes, and enhancing the capabilities of AI (Polachowska, 2019).

One of the advantages of AI is that it can detect trends in customer browsing and purchase habits. AI can give extremely precise bargains to specific clients by utilizing the millions of transactions saved and evaluated in the cloud. Human connection is now anticipated in many client transactions, including e-mails, online chats, and social media communications. AI, on the other hand, assists organizations in automating these interactions. Computers can reply to clients and demands appropriately by studying data from past conversations. Because AI is used in conjunction with machine learning, the more the AI systems communicate, the better they get. AI chatbots, for example, may communicate continuously with an infinite number of clients and address and start contact on a website or in an application (Victories, 2018.). AI also helps businesses that must communicate with a big number of clients on a daily basis. For example, organizations in the transportation sector that have the potential to have millions of passengers per day can utilize AI to convey tailored travel info in real time, such as a delayed alarm. Many bus operators, for example, are already tracking where their buses are and using AI to advise passengers of the vehicle's location and projected arrival time in real time. Customers may get this information on the bus company's website and mobile application. AI is used in retail to monitor stocks using radio-frequency identification (RFID) and cloud technologies. One of the major advantages of using cloud-based AI is the ability to quickly discover relevant and important results when analyzing big data. This can give companies the required information that can help them profit on the market.

AI may improve customer service by employing chatbots and advise systems, raise revenue by detecting and capitalizing on market possibilities, forecast consumer demand, identify and forecast user behavior, test malware, modify documents, and perform research. Organizations benefit from AI systems in a number of ways, including individual marketing, customer service, organizational optimization, inventory management, and recruiting. So, the most important aspect of looking for AI benefits is determining how much value it can offer to the firm (Polachowska, 2019). Given AI's potential, academics and the general public are concerned about both short- and long-term economic effects, such as job loss, human security, and safety hazards. Experts frequently highlight the societal risks of AI, such as the

possibility for widespread discrimination and the perpetuation of present inequity via biased algorithms. People are continually using deep-learning technologies to select who receives a loan or a job. Nonetheless, deep-learning algorithms function in a variety of ways, and they do not provide humans with an understanding of why AI makes certain assumptions or draws particular conclusions, how errors might arise, and how and when prejudices can develop. Mobile phone applications, security cameras, and electronic grids are all susceptible to security issues. This might result in money and identity theft, or failure of the internet and electricity.

Improvements in artificial intelligence may potentially offer new obstacles to world security and peace. Machine learning, for example, may be used to generate phony audio and video in order to influence elections, policymaking, and governance (ITU News, 2018). It is also a new concern for criminals to utilize sensitive marketing, health, and financial information acquired by organizations to give AI systems. If security measures are insufficient, they might be combined to construct fraudulent identities. Despite the fact that the target firms are unintentional collaborators, customer reaction and regulatory ramifications are still possible. It is increasingly challenging to ingest, organize, and connect data efficiently due to the rising volume of unstructured information being absorbed from sources such as websites, social media outlets, mobiles, and sensors. As a result, it's possible to make mistakes like mistakenly utilizing or disclosing critical information contained inside anonymized data. Such concerns are critical for members who are required to comply with data protection rules such as the European Union's General Data Protection Regulation (GDPR) or the California Consumer Privacy Act (CCPA) (Cheatham et al., 2019).

The interplay between people and machines is a key risk area. Among the most visible are the intricacies of automated transportation, industrial, and infrastructure systems. Injuries and mishaps are possible if heavy equipment drivers, vehicles, or other equipment do not know whether to override or are unable to override the systems because the operator's attention is diverted elsewhere, which is a distinct possibility in applications such as self-driving automobiles. Human judgment can also be used to prove the process's underlying consequences. Scripting errors, data management problems, and modeling data misjudgments can all have a negative impact on equality, confidentiality, protection, and enforcement inside a data analytics business. Engineering and operational issues throughout the operating environment might have a detrimental impact on the performance of AI systems. For example, one big financial institution ran into issues when its compliance software failed to detect trade irregularities since all client transactions were no longer included in data feeds (Cheatham et al., 2019). Machines are clearly superior when it comes to functioning well, but they cannot replace the human connection that forms the team. Computers are unable to form relationships with humans, which is a fundamental component of team management. People grow overly reliant on these inventions, which may generate issues for future generations. Machines can do only those tasks that humans have designed so any irrelevant output can cause a significant backdrop (Edureka, 2019).



Davenport and Ronanki (2018) emphasize that artificial intelligence is still far from human intelligence in terms of complexity and overall capabilities. However, at the same time, it is highly effective in solving specific tasks, and its impact on the world and organizations is undoubtedly significant. PwC (2017) predicts that the global GDP will be 14% higher in 2030 thanks to artificial intelligence, amounting to an additional \$15.7 trillion. This represents the largest business opportunity in today's dynamic economy. Plastino and Purdy (2018, p. 19) believe that "to fully harness the potential of artificial intelligence, companies must adopt a comprehensive approach." Nevertheless, the benefits that artificial intelligence brings encompass creating more relevant offers and gaining competitive advantages in four ways: through consumer-oriented products, consumer-oriented services, more precise definition of target markets resulting in higher conversion rates, and meeting consumer needs completely (Arsenijevic & Jovic, 2019). By adding value and creating competitive advantages, artificial intelligence effectively aligns with the business model and minimizes risks (Plastino and Purdy, 2018), fully showcasing its potential through optimizing existing processes and enhancing automation, information, and transformation effects, as well as detecting, predicting, and interacting with humans (Wamba-Taguimdje et al., 2020).

Holtel (2016) states that the adoption of any new technology impacts businesses in two ways. First, it shifts the power dynamics among individuals as some might leverage the new technology more effectively to achieve their goals, while others might not. Moreover, a "productivity paradox" might arise. In this case, artificial intelligence might not achieve the expected productivity because businesses do not know how to best leverage it. The second impact is that new technology forces all employees to improve their cognitive literacy, and its success depends on collaboration among all stakeholders. This notion is supported by Carter who researches and proves that technology and artificial intelligence-based solutions will mainly require the enhancement of current skills rather than the adoption of new ones (Carter, 2018).

Considering all the above, artificial intelligence can enhance performance at an organizational (financial, marketing, and administrative) and process level. By enhancing artificial intelligence aspects, organizations can increase the business value of transformed projects (Wamba-Taguimdje et al., 2020). "Artificial intelligence tools, due to their ability to process large amounts of data, can provide comprehensive information to those controlling them. Today, this significantly increases the threat of massive data extraction and analysis" (Shabbir & Answer, 2018).

On the other hand, there are drawbacks to implementing artificial intelligence in business. All employees are affected by the application, altering their work methods, decision-making processes, predictions, and forecasts (Holtel, 2016). Additionally, Watson (2020) cites the challenge of finding suitable application models for specific problems, thorough error and bias review, and achieving transparency to justify automatically made decisions that impact

consumers. Currently, there is no regulation overseeing artificial intelligence operations and ensuring compliance with ethical standards. Many organizations have initiated discussions and issued recommendations for researchers and developers to create intelligent ethical systems. The question of the morality of their actions is becoming increasingly important (Wamba-Taguimdje et al., 2020).

Apart from the disadvantages of artificial intelligence that lead to negative impacts on humans, the development of artificial intelligence also comes with challenges related to data. The lack of sufficient volume and quality of data used for model training remains a significant challenge for solution development. Data security, management, execution, and privacy are the biggest challenges related to data integration. Solution cost, execution, and scalability are top management problems, while solution reporting costs are the primary challenge in artificial intelligence implementation (Framingham, 2020).

Often, there is no consensus within an organization regarding the goal of artificial intelligence implementation, slowing down the entire process. Nonetheless, there is no alternative – companies must start implementing new technology to keep up with the latest trends and gain experience they can leverage later on (Holtel, 2016).

### **3.3 AI vs Human Intelligence**

The characteristics distinguishing human intelligence from artificial intelligence can be divided into several categories:

1. **Thinking Ability:** The absence of emotions in AI can be disadvantageous in situations where feelings are necessary. Machines strive to find substitutes for human behaviors using neural networks, attempting to replace the capability of intuition with a statistical approach (Shabbir & Answer, 2018). However, informal knowledge is challenging to formalize for logical representation, and theoretical solutions might not necessarily solve practical problems (Eriksson et al., 2020). Artificial intelligence assesses human thinking through a cognitive modeling approach, assuming that understanding human thought processes is possible. By defining theories of human thinking, it can be expressed as a computer program, and the program's reasoning can be compared to that of a human tackling the same problem (Korteling et al., 2021).

2. **Planning Ability:** Planning and creativity together enable combining available elements to solve problems. A way to explain and transfer this ability to machines has not yet been found (Shabbir & Answer, 2018).

3. **Action Taking Ability:** The ability rooted in feelings, deeper thinking, and comparing the utility of actions. Artificial intelligence can only take actions that are in line with its programmed instructions. Machines cannot learn independently without being pre-trained

for a specific task. No neural network in the world can identify objects, images, or sounds, and play video games the way humans do (Shabbir, J. & Answer, T. 2018). Nevertheless, machines can perform significantly more complex tasks much faster than humans. For instance, a mobile calculator can execute calculations a million times more complex (Korteling et al., 2021).

4.Perception: Unlike humans, machines primarily rely on cameras, microphones, and sensors, such as computer vision, to process visual input (Shabbir & Answer, 2018).

5.Learning Ability: Humans' key virtue is their speed and diversity in learning new concepts and applying them in new situations. Computers often struggle with generalizing based on a specific pattern (Shabbir and Answer, 2018). On the other hand, according to the Korteling, the amount of cognitive information a person can consciously process is highly limited, with a working memory capacity of about ten to fifteen bits per second. Additionally, cognitive knowledge and skills (memory) decline over time more than perceptual-motor skills. Due to such limited information retention, a significant portion of what is learned is easily forgotten (Korteling et al. 2021).

6.Natural Language Processing: This provides machines the ability to read and understand human language from written sources through semantic indexing (Shabbir, M. and Answer, F. 2018). Human speech must first be transcribed into text, known as speech recognition, which involves recognizing spoken words but not their meanings. Natural language processing is then used to associate the appropriate meaning with words (Paschen et al., 2019).

7.Cognitive Bias: Human cognitive processing displays systematic distortions expressed through repetitive tendencies, inclinations, or moods, leading to inaccurate, suboptimal, or simply incorrect decisions and outcomes (Korteling et al., 2021).

These differences between human and artificial intelligence have been summarized into five fundamental distinctions by Korteling et al. (2021):

- **Structure:** Hardware and software constitute separate entities. When a computer learns a new skill, that algorithm must be copied to similar digital systems. In contrast, learning in humans is automatically integrated into the entire system.
- **Speed:** Signals in AI systems travel nearly at the speed of light, while nerve conduction speed in humans reaches a maximum of 120 m/s.
- **Connectivity and Communication:** Humans require language or gestures for communication, whereas computers are directly connected, facilitating communication, and enabling collaboration based on integrated algorithms.
- **Updatability and Scalability:** Computers have virtually no limitations regarding reconfiguration, possessing algorithms, data processing capabilities, and storage capacity

needed for task execution. Rapid and structured expansion and immediate progress are challenging to apply to humans.

- **Efficiency:** The human brain is far more efficient than computers in terms of energy consumption. It requires less energy than a light bulb, while supercomputers with similar levels of functionality consume as much energy as powering a village.

In conclusion, it's evident that artificial intelligence differs from human intelligence in several aspects. Specifically, it surpasses human intelligence in efficiency and scalability, while lagging in perception and thinking. The main characteristic of artificial intelligence is its dependence on human intelligence. As it can only perform predetermined tasks, artificial intelligence serves as a support to humans in carrying out specific tasks.

## **4 CHATGPT**

### **4.1 Evolution of ChatGPT**

In the realm of artificial intelligence (AI), chatbots serve as a compelling example of how technology can streamline customer interactions. These virtual assistants, like Alexa and Siri, are now part of our daily lives, readily available to help with tasks as varied as playing a song or setting an alarm. Businesses have embraced the potential of chatbots, employing them on websites, through email, text messaging, and mobile apps, to enhance customer engagement and support. Chatbots can efficiently handle a wide range of customer inquiries, engaging in human-like conversations, ultimately elevating the overall customer experience (Kim, 2019).

A notable case of successful AI integration into marketing and customer service is Starbucks. They employ an AI-powered chatbot, the Starbucks Barista bot, which empowers customers to place coffee orders with minimal human intervention. This bot can even comprehend complex orders, including unique requests like a "small cappuccino nonfat mild hot with whip." Within this thesis, I will delve into the realm of chatbots, offering a comprehensive overview and focusing on ChatGPT, a prominent AI chatbot model.

In recent years, the prevalence of chatbots has increased significantly, with customers increasingly opting to interact with these automated systems rather than human representatives when engaging with businesses. This trend has prompted many companies to integrate chatbots into their customer service and engagement strategies. According to Chadha (2021), over 50% of millennials frequently use chatbots for everyday tasks, such as making simple purchases and seeking information. Chatbots are particularly valuable to companies because they can be pre-trained to handle common inquiries and provide information on predefined topics. Moreover, they offer the advantage of round-the-clock customer service without fatigue, a capability that human agents simply cannot match. Chatbots operate on fundamental principles. They analyze keywords in user input and

generate responses based on the text and previous interactions. Several types of chatbots exist, including pre-trained bots with predefined communication routes, intelligent bots capable of understanding conversations, hybrid bots combining features from different models, and chatbots that allow human customer support agents to join the conversation.

## **4.2 ChatGPT-3.5**

Launched in November 2022, Generative Pre-Trained Transformer (GPT) is a chatbot that creates text that sounds like human speech using artificial intelligence. American artificial intelligence research company OpenAI created ChatGPT. With its high level of sophistication, ChatGPT can handle a variety of requests, from simple inquiries to more difficult ones like making marketing materials for social media or producing a financial plan for an event planner. ChatGPT employs its enormous quantity of data storage and effective design to analyze and understand the user's requests and generate appropriate responses that are almost impossible to distinguish from genuine, human-created ones (Lund & Wang, 2023).

ChatGPT uses artificial intelligence to generate text that sounds like human speech. Text generation for programs such as chatbots, as well as language modeling and translation, are just a few of the many applications for ChatGPT. ChatGPT-3.5 is one of the most extensive language processing models known today, with 175 billion parameters (Hughes, 2023). When asked, "Could you tell me what ChatGPT is?" "ChatGPT is a language model developed by OpenAI, based on the GPT-3.5 architecture, it is a type of artificial intelligence (AI) that uses deep learning techniques to generate human-like text responses conversationally." It has been trained on a vast amount of data from the 9 internet, books, articles, and other sources, enabling it to understand and generate text on a wide range of topics. ChatGPT is designed to engage in conversations with users and provide responses based on the input it receives, making it a powerful tool for a variety of applications, such as customer support, content generation, and language-based tasks" (OpenAI, 2023).

### **4.2.1 Limitations of ChatGPT 3-5**

Even though ChatGPT is a very potent tool that has the potential to forever alter numerous professions, it is not without flaws. The limited amount of data that ChatGPT can access is one of its main drawbacks. ChatGPT is currently unable to provide accurate and up-to-date information or responses on all issues because the data it has access to only extends until the year 2021. ChatGPT is unable to respond to prompts or questions regarding more recent topics. Instead of using a database of facts to respond to queries or tasks, ChatGPT bases its responses on previously discovered patterns that are drawn from the training data (Caulfield, 2023). As a result, even if the answers appear accurate, ChatGPT may not always deliver proper information or dependable replies. When requested for references or citations,

ChatGPT may be able to supply them, but the content might be totally made up. Links to the references may be supplied using ChatGPT, but they will not function. To summarize, the answers should always be double-checked before usage. ChatGPT can only follow one supplied instruction at a time because it is unable to handle many tasks at once. Along with the, one of ChatGPT's drawbacks is that it "May occasionally produce harmful instructions or biased content" (OpenAI, 2023).

#### **4.3 ChatGPT-4**

The newer version of ChatGPT known as GPT4 is available. This version was made available on March 14, 2023. GPT-4 is OpenAI's most sophisticated system, capable of producing safer and more helpful replies than the preceding model. One of the most significant distinctions between GPT-3,5 and 4 is that GPT-4 can evaluate both text and images, whereas GPT-3,5 can only analyze text sources. To view GPT-4, a subscription to ChatGPT Plus is required, which costs \$20 per month. There was a backlog for GPT-4 in March 2023 since the program's popularity outstripped its capabilities and OpenAI could not accept any more participants at the time. For example, it is possible to submit a worksheet to GPT-4, and it would be able to scan it and generate answers to the questions. It might also read a graph you submit and do calculations based on the information provided. GPT-4 features a larger training dataset and a more robust and complicated architecture than its older sibling (GPT-3.5). This enables GPT-4 to give more precise and reliable findings. GPT-4 is capable of a broad range of activities, including language translation, summarization, and even creative writing (Lazarević, 2023).

## **5 THE RELATIONSHIP BETWEEN ARTIFICIAL INTELLIGENCE AND DIGITAL MARKETING**

### **5.1 Usage of ChatGPT in different digital marketing departments**

Carter emphasizes the importance of staying up to date with technological advancements in all professions and organizations. Businesses worldwide are embracing AI as part of their digital transformation journey, driven not only by capability but also by the need for agility, flexibility, innovation, and scalability. The utilization of artificial intelligence is on the rise globally, as revealed by the International Data Corporation (IDC) poll of more than 2,000 IT professionals and decision-makers. Over a third of AI projects are now in advanced development stages, with more than a quarter already in production. Furthermore, businesses report increased spending on AI initiatives (IDC, 2020).

In the domain of digital marketing, AI is frequently employed in tasks such as application logins, data copying, automated email sending, and form filling, all of which mimic human actions but are executed faster and at lower costs (Ribeiro et al., 2021). Chatbots represent a prominent example of AI usage in digital marketing. Chatbots leverage natural language

processing to understand and respond to customer queries, enhancing overall customer experiences and response times. They are available all the time, providing customers with the perception of timely service and enabling cost reduction for businesses (Zečević et al., 2020).

From a customer perspective, chatbots facilitate one-on-one communication through personal devices, offering convenience and time-saving benefits (Zečević et al., 2020). Image and speech recognition technologies, such as Siri, Alexa, and Google Home, are now ubiquitous, enabling users to interact with various devices through spoken commands. These technologies also encompass facial recognition on smartphones and image recognition on platforms like Google, collecting data on human features to enhance user experiences and targeting capabilities (Zveri et al, 2019).

AI has progressed to the point where it can generate images that are indistinguishable from real photographs. AI models can mimic human speech and appearance, leading to their incorporation in fashion campaigns and even movie production. Startups offer services to create AI clones by scanning individuals' bodies and recording their voices. Content creation and optimization are areas where AI excels. AI can generate ideas, edit content, write articles, create ads, and tailor campaigns based on consumer data, making advertisements more relevant to specific consumer groups through Natural Language Processing (NLP) analysis. Virtual and augmented reality technologies have emerged as cutting-edge tools in digital marketing. They focus not only on products or services but also on creating immersive customer experiences, allowing customers to visualize the experiences they can expect. Clustering models, utilizing unsupervised algorithms, group customers based on various criteria, such as income, household size, and occupation. This enables marketers to target specific customer segments more effectively, saving time and resources (Kassalis, 2010).

ChatGPT, based on Generative Pre-Trained Technology, was launched by OpenAI in late 2022 and has made a significant impact in businesses and academia. It mimics human communication and provides answers on a wide range of topics, creating a human-like interaction experience (Liu et al., 2021). However, its impact on economic productivity and its potential to exacerbate socioeconomic disparities are subjects of ongoing debate. Studies indicate that ChatGPT can empower less-skilled workers to compete with university graduates, potentially leveling the playing field (Rotman, 2023). This technology has already demonstrated its ability to perform creative tasks and storytelling, with applications in audiobook narration and scriptwriting (Tobaccowala, 2023). As AI continues to expand across industries, its impact on society remains a topic of exploration and imagination (Rahman & Watanobe, 2023).

AI use in various digital marketing techniques has the potential to revolutionize the way organizations connect with their customers. AI will assist in driving relevant traffic, acquiring new customers, increasing revenues, and retaining existing customers. Businesses

are continually exploring utilizing artificial intelligence to handle their marketing expenses. Advertising investment on digital platforms has increased by 20% each year, as predicted by the industry. Digital marketing itself implemented AI by avoiding intermediary system development. Customer engagement chatbots, speech recognition, translation on their websites, and semantic search in brand catalogs are all examples of current marketing automation techniques (Infosys, 2018).

AI in digital marketing has the potential to change the way consumers shop. Several organizations are already using AI in digital marketing to improve the purchasing experience of their consumers. Customers may now use an augmented reality tool to check out things before purchasing them rather than just browsing them. Topshop employs this AI technology to create virtual fitting rooms in their newly established stores. Customers may view how different garments appear on them by merely stepping in front of a large screen in these stores. They will see a virtual representation of themselves while they are in front of the screen. This type of AI technology will allow buyers to try on different items without having to physically try them on. Other businesses, including retailers, are gradually using AI technology in their marketing methods. IKEA, a Swedish furniture business, takes this technology to a whole new level. IKEA intends to release an app that will allow customers to imagine things in their homes before purchasing them. This software will allow users to measure their rooms. They will then be able to examine how various items and styles of furniture appear based on design. Customers will be able to choose a product and then view it as if it appeared in their own house. Purchases can be made through the app, so customers do not have to leave their homes (Barker, 2019.) AI in digital marketing assists firms in reaching their intended audience. Organizations will find it simpler to target people after incorporating AI into their systems. AI gathers user data, analyzes it, and predicts its future behavior. Companies can use this information to target adverts based on client preferences. Furthermore, integrating AI in digital marketing brings up new avenues for developing successful advertising strategies. Airwalk promoted their limited-edition sneakers, Airwalk Jim, using augmented reality and geolocation. To get access to these shops, people had to download the Airwalk app and go to Washington Square Park or Venice Beach. People visiting these locations could discover virtual shoes connected to GPS. People who found these stores were taken to Airwalk's website. To make a purchase, they would put a code given to them on site. These innovations are made possible with AI in digital marketing (Barker, 2019).

## **5.2 Importance and benefits of ChatGPT in digital marketing**

The integration of ChatGPT into digital marketing departments has ushered in a new era of possibilities for professionals seeking to harness AI's potential to enhance customer engagement and optimize campaign performance. In the ever-evolving landscape of digital marketing, one of the foremost challenges has been the consistent creation of high-quality and engaging content. This is precisely where ChatGPT shines, offering a solution to this



perennial hurdle. ChatGPT's unique capabilities enable it to generate content at scale, resulting in significant time and resource savings for marketing teams. From drafting blog posts and social media updates to crafting product descriptions and email marketing campaigns, ChatGPT demonstrates its prowess. A notable example is Copy.ai, a content generation platform fueled by ChatGPT, which empowers marketers to swiftly create a compelling copy (OpenAI, 2023).

Furthermore, ChatGPT boasts the ability to adapt to a wide spectrum of writing styles and tones, affording marketers the flexibility to tailor content to their specific audience. Whether the need is for a formal tone in a financial blog or a casual tone for a social media post, ChatGPT excels at producing content that resonates with the target demographic. Such versatility is invaluable in a field where content is undeniably king. The conversational prowess of ChatGPT finds a particularly significant application in the arena of customer engagement. Many businesses employ chatbots and virtual assistants powered by ChatGPT to provide immediate support and address customer queries. These AI-driven chatbots operate round-the-clock, ensuring a seamless and uninterrupted customer experience.

For instance, industry leader Sephora harnesses a ChatGPT-powered chatbot to assist customers in discovering the right products and addressing beauty-related inquiries. This not only elevates customer satisfaction but also allows human agents to redirect their focus toward more intricate tasks. Furthermore, ChatGPT excels in the realm of personalization, a pivotal element in contemporary digital marketing. Customers have come to expect tailored experiences, and ChatGPT plays a vital role in meeting these expectations. By scrutinizing user data and preferences, it can proffer relevant product suggestions, offers, or content, thereby boosting conversion rates.

Modern digital marketing hinges on personalization, and ChatGPT is a potent tool in this regard. Drawing insights from user behavior and preferences, it can furnish personalized recommendations for products, content, and offers. E-commerce giants like Amazon and Netflix employ AI models akin to ChatGPT to deliver tailored recommendations to users. When a user visits Amazon, they encounter product recommendations based on their browsing and purchase history. This not only enhances the user experience but also enhances the likelihood of successful sales. Furthermore, ChatGPT is instrumental in the creation of personalized email marketing campaigns. It has the capacity to generate email content that speaks directly to the recipient's interests and needs, resulting in higher open and conversion rates. The application of artificial intelligence assists digital marketing experts in developing intelligent systems that can analyze and react like human beings. Artificial intelligence offers an exceptional ability to identify, analyze, create, and retain customers (Nair & Gupta, 2021). According to a PwC study conducted in 2017, 72% of surveyed marketing professionals see the use of artificial intelligence as a business opportunity.

According to Perrin (2021), to expand a company's market share, advertising must acquire a lot of data, which is a task that artificial intelligence can undoubtedly assist with. Although the way data is evaluated and turned into relevant customer insights has been revolutionized by artificial intelligence, its usage in the context of digital marketing is not well understood (Nair and Gupta, 2021), 43% of marketing professionals spend seven or more days each month manually gathering, cleaning, and harmonizing data sets, according to research from Salesforce (2021). Automating these procedures and assuring uniform data preparation while maximizing human resources are two benefits of adopting artificial intelligence. Over half of the respondents employ an automated strategy to gather data from various platforms since they are aware of these benefits. Even while automation makes cross-channel performance insights faster and more thorough, only 6% of cross-channel analytics reporting is entirely automated (Salesforce, 2021).

Data accuracy, data accessibility, marketing process optimization, linking marketing and sales data, giving leadership visibility, centralizing data from various channels, technical data interpretation skills, real-time decision-making, media planning, consistent measurement, and/or taxonomy, as well as AI-driven insights are the most crucial components of successful marketing execution, according to Salesforce's research (2021). All of these advantages are achievable with artificial intelligence. Real-time marketing, which is technically represented by real-time advertising, bidding, and other applications, is based on the digitalization of marketing processes and delivers replies to client needs in real time. Current real-time marketing applications also include social listening, which is the process of recording, scrutinizing, and assessing posts, shares, and likes on social media sites in order to gauge sentiment and opinions (Lies, 2019). Artificial intelligence is already helping marketing professionals with basic tasks like propensity modeling, media buying, content generation, and ad targeting (Petrock, 2019). Without the use of machine learning, it would not be possible to recognize repeated adverts to the same household (Miklosik et al., 2019). According to Wirth (2018), marketing and data science experts can take advantage of a variety of predictive models, machine learning, and other technologies to get insightful marketing knowledge, take the required actions, and learn from the experience continually. Online targeting and dynamic attribution are only two examples of domains where artificial intelligence capabilities are already in use. Customer identification is another area where artificial intelligence is replacing digital marketing, according to Tiautrakul and Jindakul (2019). As a result of artificial intelligence's ability to approach clients based on their tendency to purchase products, understanding the qualities of the target audience is no longer as important.

Additionally, since artificial intelligence can comprehend a greater volume of information than the human brain, it is better able to do tasks like keyword analysis and ad space detection. Artificial intelligence can comprehend the context of a webpage and recognize the meanings of words, sentences, and symbols, while it is less likely to replace humans in content production. As a result of different crises, marketing managers now have to base

their decisions on data and market shifts (Bala and Verma, 2018). Companies can now gather and archive enormous amounts of input data (Big Data). In the digital economy, artificial intelligence efficiently manages this data. Data Management Platforms (DMPs) are a tangible result of the usage of artificial intelligence in digital marketing (Tiautrakul and Jindakul, 2019).

According to Watson (2020), the customer lifecycle, segmentation and modeling, risk assessment, and fraud detection are all factors in the early adoption of predictive analytics in a number of businesses. Artificial intelligence will help businesses cut expenses, accelerate growth, and acquire a competitive edge. Studies show that 26% of marketing professionals utilize artificial intelligence for campaign optimization and 25% use it for product suggestions. (Kotane et.al., 2019). Machine learning can give marketing professionals the data they need to make informed decisions, according to Miklosik et al. (2019). Although there are many obstacles and difficulties in applying artificial intelligence, the major advantages of using AI-based solutions for digital marketing include: Their ability is that the decisions they make are quick and rely solely on the data available to them, they do not have the ability to think emotionally. The advantage of artificial intelligence is that they simplify processes and provide information with precision and efficiency. Unlike humans, machines do not make mistakes, they follow pre-defined rules, and the error rate is reduced. Artificial intelligence enables research in areas that are inaccessible to humans, quickly adapting to different conditions. Seeing these advantages, the market has embraced these tools, thereby speeding up processes, making easier decisions based on data and enabling real-time responses.

### **5.3 Impact of AI on Digital Marketing**

AI is already influencing every business in the modern world. AI has already exhibited a wide range of skills, such as its impact on company marketing and customer behavior. The real influence of artificial intelligence on digital marketing is being evaluated on a daily basis, and marketers are continually exploring new applications for the technology. AI can accomplish many challenging jobs and is also extremely useful. The benefits of AI are vast and continue to grow. Because each customer is at a different stage of life, not every consumer wants the same material, and giving the same content to all consumers may not be very appealing to all. AI will help in this case by making it easier to distinguish between clients and by providing tailored content for each and every one of them. As a result, the buyer will get more acquainted with the company's brand. AI technologies are beneficial, especially when used on e-commerce platforms.

Every e-commerce website has a search bar that links them all together. The proper implementation of a search bar simplifies client engagement. AI will make it easier to understand client behavior, making it easier to propose things to customers. AI might help e-commerce websites increase income and consumer loyalty by up to 45% (Colan & Infotech, 2019). Major firms such as Amazon, Google, Facebook, and other ad networks are

investing in AI to make the most of it. Right present, the benefits of AI are expanding, particularly in e-commerce. AI has had an intriguing influence on a few important concerns. It has enhanced user experience, forecasted ROI more accurately, and helps with decision-making, sales forecasting, and understanding customer wants. Furthermore, error rates are minimized, and user monitoring is simplified. Despite the fact that information is available in multiple digital marketing sites, it may still be combined and exploited by applying AI technology designed particularly for the industry (Marr, 2019).

The usage of email marketing has also evolved tremendously. Before AI, it was difficult to create email content for people. However, owing to AI technology, organizations may now have tailored content developed for a specific target audience. Marketing firms may increase their revenue by generating this type of content. Everyone will buy something, but it will be based on their preferences and moods. As a result of adding AI into email services, the consumer base and sales will grow. AI has also had an influence on the advertising sector. Prior to AI, controlling advertising expenses was one of the most onerous tasks for organizations; however, now that AI automatic solutions are accessible, forecasts are more accurate, and concerns may be avoided. Previously, it was not feasible to adjust marketing efforts in the middle of the cycle; instead, AI marketers had to wait to see how previous changes would be affected. With commonly used automation technologies such as ML, it is now feasible to make rapid judgments even while campaigns are running. Despite the numerous benefits of AI, many firms are hesitant to invest. The reasoning is that advantages take time to manifest, and A/B testing is an ongoing process. Regardless of past predictions, this cannot be prevented (Cola & Infotech 2019.).

## **6 EMPIRICAL ANALYSIS**

### **6.1 Methodology**

This paper utilizes a qualitative research method, specifically one-on-one semi-structured in-depth interviews. Interviews, a component of qualitative research, employ a conversational approach to gather precise data from participants in a personalized and detailed manner. Unlike quantitative methods that emphasize numbers and statistics, qualitative research delves into opinions and attitudes, aiming to establish a deeper understanding by encouraging participants to express themselves and provide detailed feedback (Bryman & Bell, 2015).

Thematic analysis will serve as the chosen approach for analyzing this study's data. Thematic analysis is renowned for producing cohesive results when examining qualitative data (Saunders et al., 2019). It is a versatile technique applicable across various disciplines and research domains, capable of addressing diverse research questions and working with different datasets. Thematic content analysis involves scrutinizing collected data to identify recurring ideas, subjects, or patterns, allowing the researcher to make sense of the

information and pinpoint emerging themes (Braun et al., 2019). Ultimately, the analysis will establish connections between the concepts presented in the paper and the insights gathered through interviews, facilitating a comprehensive response to the research topic.

Conducted as semi-structured, in-depth interviews (Granot et.al., 2012; Strauss & Corbin, 1998), this interview process revolved around four central research questions (see Appendix 2):

RQ1: Does ChatGPT improve operational efficiency in digital marketing?

In relation to this research question, interviewees were probed about the extent to which ChatGPT enhances operational efficiency within digital marketing. They were asked about their practical experiences with ChatGPT and how it aids in streamlining routine tasks in their digital marketing roles.

RQ2: What are the primary differences and challenges faced by individuals when integrating AI into their everyday tasks compared to traditional research methods?

Questions associated with this research question sought to explore the knowledge and information spectrum of artificial intelligence, particularly ChatGPT, in comparison to human knowledge. Interviewees were asked to provide insights into the breadth and relevance of information provided by ChatGPT and how it compares to human understanding.

RQ3: How does ChatGPT's use in business impact job opportunities in copywriting, ad brainstorming, and demographic research for targeting potential buyers?

Under the scope of this research question, interviewees were encouraged to discuss the potential consequences of ChatGPT integration on job roles, particularly focusing on tasks like copywriting, ad brainstorming, demographic research, and the creation of targeted buyer personas. The objective was to assess whether ChatGPT is perceived as a threat to these professional areas.

RQ4: What are the crucial factors associated with using ChatGPT in digital marketing?

Questions pertaining to this research question delved into the role of the human perspective and expertise in contrast to ChatGPT's knowledge. Respondents were prompted to share their views on whether ChatGPT has the capacity to entirely supplant human judgment and understanding.

The interview process initiated with general inquiries concerning the participants' roles in managing ChatGPT within their professional contexts, their experiences with AI in digital

marketing, and the specific AI tools or systems employed. These initial questions laid the groundwork, progressively guiding respondents to provide more comprehensive insights and opinions on the quartet of research questions. Throughout the interviews, the interviewer maintained an uninterrupted flow of discussion, even if it led to conversations diverging from the original interview framework. The insights gathered through these interviews collectively addressed the four core research questions.

Since digital marketing has different departments, I have decided to conduct interviews based on employees who work in different digital marketing companies (Emedia Patch, Lilium, Paradox and Stellar) as well as departments, such as social and search advertising, online advertising, designers, with a focus on the different advertising platforms to see in which ways ChatGPT can help and does it have any advantages in workflow. The research took place in a different Bosnian digital advertising companies between August and September 2023. In order to compare findings and draw insightful conclusions, I aimed to investigate the utilization of ChatGPT in various aspects of digital marketing companies. As a deliberate choice, I included ten respondents from diverse departments within these companies. The sample encompassed respondents from the following departments: Digital Advertising Operations, Creative and Design Department, Paid Search, Paid Social, Campaign management and Analytics department. The duration of each interview session varied, lasting between 30 to 90 minutes. This flexibility was determined by the availability and willingness of the participants to provide more or less detailed insights. All ten interviews were conducted successfully, and transcripts were prepared for later analysis. These interviews also revealed consistent patterns, allowing us to reach a point of "theoretical saturation" regarding the specific topics of interest we had outlined (Strauss & Corbin, 1998, p. 203). To ensure the privacy and confidentiality of certain respondents during the data collection process, a unique coding system was employed for each interview, represented by alphabetical letters. These codes will serve as reference points in subsequent sections of this thesis, allowing for a detailed examination of the insights and discussions presented (see Table 1). Furthermore, to offer readers a more comprehensive understanding of the operational context within which these institutions function, Table 1 also provides detailed descriptions of each company.

*Table 3:Description of the Sample*

<b>Participant's Code</b>	<b>Gender/Digital Marketing professionals</b>	<b>Participant's position</b>	<b>Company's Characteristics</b>
A	Female	Paid Social Junior	A digital marketing agency specializing in social media management and influencer marketing. Known for its creative campaigns and focus on niche markets
B	Male	Paid Social Media Manager	A social-first agency that concentrates on viral content creation and social media advertising. Notable for its viral campaigns and strong social media presence.
C	Male	Paid Social Campaign Manager	A paid social advertising agency that excels in leveraging platforms like Facebook, Instagram, and LinkedIn for maximum client ROI. Known for its meticulous audience targeting and ad optimization techniques, this agency has earned a reputation for driving exceptional results in the paid social sphere.
D	Female	Search Specialist	A leading paid search advertising agency that specializes in Google Ads and Bing Ads campaigns. Recognized for its in-depth keyword research, strategic bidding, and data-driven approach, this agency consistently delivers high-quality leads and conversions for clients across various industries.
E	Female	SEO	A large-scale digital marketing firm with a global reach, offering services ranging from SEO optimization to email marketing. Recognized for its data-driven approach and extensive client portfolio.
F	Male	Creative Director	A multidisciplinary digital marketing agency with a design-centric approach. They combine creative design with data-driven strategies to create impactful digital experiences.
G	Female	Internal Campaign Manager	A digital marketing agency that excels in campaign management and analytics, offering comprehensive solutions for optimizing online advertising efforts. They are known for their

*Table 3 Description of the Sample (cont.)*

			meticulous tracking, A/B testing, and data-driven decision-making
H	Male	Social Specialist	Agency specializing in campaign management and paid social campaigns, using different social platforms.
I	Female	Associate Analyst	A data-centric digital marketing firm that focuses on campaign optimization through advanced analytics. Their team of data scientists and marketing experts use cutting-edge technology to dissect campaign performance, enabling clients to make informed decisions and continuously improve their digital marketing strategies.
J	Female	Senior Graphic Designer	Agency specializing in paid social campaigns for e-commerce brands. Renowned for its expertise in crafting compelling ad creatives, optimizing product listings, and implementing dynamic retargeting strategies. Also, agency that places a strong emphasis on design aesthetics

*Source: Own work*

## 6.2 Results

We conducted an analysis of the interview questions to identify the most frequently mentioned phrases. These terms were then categorized into meaningful groups and associated with the five most commonly occurring linking terms. Specifically, we transformed these linking terms into labels for each group based on a threshold of seven or more mentions in the overall word count. Additionally, a few terms that appeared less frequently were included in the matrix to facilitate comparisons between related terms.



*Table 4: Cross-case Comparison - Frequently Mentioned Terms in Interviews*

<b>Label: ChatGPT (115)</b>	<b>Label: Digital Marketing (56)</b>
AI (83)	Campaign (27)
Data (82)	Management (19)
Humans (60)	Paid Social (13)
Creative (59)	Search (8)
Analysts (50)	Designer (7)
Task (41)	
Time (40)	
Digital (36)	
Strategies (36)	
Companies (20)	
Copy (20)	
Benefits (18)	
Awareness (17)	
Faster (15)	
Information(14)	
Chatbots (12)	
Limitations (11)	
Report (7)	
Capabilities (7)	

*Source: own work.*

For the final analysis, we synchronized the group labels with the prevalent terms encountered in the interviews, aligning them with the topics relevant to the research inquiries. The term "ChatGPT" corresponds to the primary subject, signifying the use of AI in Digital Marketing. This label not only emerged as the most frequently used term but also falls within the largest group of commonly used terms. The second most prominent term is "AI," indicating the utilization of various AI technologies in digital marketing. "Data" suggests a strong emphasis on data-driven decision-making and analytics in digital marketing. Participants likely discussed the collection, analysis, and utilization of data to optimize marketing efforts. "Humans" appeared in sixty percent of instances, emphasizing the human element across different domains. "Creative" surfaced in fifty-nine percent of cases, highlighting the role of human creativity in various contexts. Additionally, "Task" and "Time" were notable, reflecting the efficiency of utilizing AI in task management and time-related aspects.

"Strategies" and "Digital" played central roles, making up thirty-six percent of the mentions. Finally, "Copy" appeared in twenty percent of instances, suggesting the integration of AI to assist in generating diverse ad copies. These labels provide a comprehensive overview of the recurring themes and concepts explored in the interviews, offering valuable insights into the integration of AI, particularly ChatGPT, in the field of digital marketing.

"Marketing," was the second group label, highlighting the variety and significance of several departments: social, search, campaign management, designers. "Paid Social" is a subcategory of digital marketing that received substantial attention in the interviews. It suggests a strong emphasis on the use of paid advertising on social media platforms. The number "13" indicates the frequency with which this term was mentioned, signifying its importance in contemporary marketing strategies.

"Campaign" is a pivotal term that signifies the planning, execution, and management of marketing campaigns. Its high frequency of mention (27 times) underscores the significance of campaign management in digital marketing. Participants likely discussed various aspects of campaign development, optimization, and performance analysis. The term "Management" is broad but integral to digital marketing operations. It implies the need for effective organization, coordination, and control of marketing activities. With 19 mentions, it reflects the challenges and strategies related to managing digital marketing initiatives. "Search" and its presence in the interviews (8 mentions) suggests discussions about optimizing content for search engines, keyword targeting, and the role of search in digital marketing campaigns.

"Manager" represents individuals responsible for overseeing and coordinating various aspects of digital marketing. While it was mentioned less frequently (2 times), it likely refers to the roles and responsibilities of marketing managers in strategizing and executing digital marketing campaigns. The term "Designer" is significant in the context of digital marketing, suggesting the crucial role of design in marketing campaigns. With 7 mentions, it underscores the importance of visual elements, graphic design, and creative content in creating effective digital marketing materials.

Designers are key contributors to the development of visually appealing and engaging content that resonates with the target audience. The frequency of this term highlights the emphasis on the creative and visual aspects of digital marketing campaigns, where design plays a pivotal role in capturing and retaining audience attention.

Table 3 provides an overview of the key findings in relation to the three research objectives and the related sub-concepts. The responses' statements made during the interviews serve as evidence for the insights.

*Table 5: Summary of Interviews' Insights on Concepts of Interest: Cross-case Presentation*

Construct	<b>RQ1: Does ChatGPT improve operational efficiency in digital marketing?</b>	<b>RQ2: What are the primary differences and challenges faced by individuals when integrating AI into their everyday tasks compared to traditional research methods?</b>
A	I have used AI-powered chatbots in my work. In the context of paid social advertising, AI chatbots can help with ad optimization and audience targeting. I perceive ChatGPT as a time-saver and believe it improves operational efficiency in tasks like ad targeting and audience analysis.	For instance, in digital marketing, it can help generate ad copy ideas or recommend audience segments for targeting. It's challenging to quantify the exact speed difference, but it's evident that AI can process data more quickly than humans."
B	I've employed AI chatbots in campaign management, especially for tasks like data analysis and reporting. ChatGPT has been a valuable tool for streamlining these data-related tasks. I believe it significantly enhances operational efficiency within our team by freeing up time and enabling us to focus on more strategic aspects of campaign management.	In campaign management, it can provide quick data analysis and optimization suggestions. This speed advantage is valuable for real-time decision-making."
C	I've integrated AI chatbots into our paid social media strategies, particularly for ad targeting and segmentation. ChatGPT has played a significant role in improving operational efficiency within our team	For instance, it can quickly identify trends in ad performance. The exact speed difference varies depending on the task complexity, but it's safe to say that AI significantly accelerates data-related tasks in digital marketing.
D	By implementing AI chatbots, we were able to provide quicker responses to frequently asked questions, which improved customer satisfaction and allowed our team to focus on more complex tasks. ChatGPT has had a noticeable impact on workload and time management in my role.	It should be used as a tool to augment human capabilities rather than replacing the need for human judgment, especially in complex situations. AI may struggle with understanding context and providing nuanced responses in certain situations, which can limit its effectiveness.

Table continues

*Table 5: Summary of Interviews' Insights on Concepts of Interest: Cross-case Presentation (cont.)*

E	It assists in content optimization by quickly analyzing keywords and generating SEO-friendly email content. ChatGPT has had a positive impact on workload and time management	ChatGPT supports humans by aiding in decision-making without taking over their responsibilities entirely. There's also a need for ongoing monitoring to ensure AI-generated content remains aligned with our goals.
F	I've used ChatGPT to generate initial design concepts and brainstorm creative ideas quickly. It's a valuable resource for creative professionals like me, as it provides inspiration and a starting point for design projects.	ChatGPT can be faster and more thorough than humans in finding information for digital marketing, particularly when dealing with large datasets and research tasks. ChatGPT is helpful in generating ideas, it may not always fully understand the nuances and specifics of our design requirements
G	While I haven't extensively used AI chatbots in my daily life, I recognize their potential benefits in automating tasks.	In internal campaigns, it contributes to efficient content planning while allowing us to maintain control over campaign strategy and messaging. We must also maintain a human touch in our internal communication, which can be challenging.
H	ChatGPT has positively impacted workload and time management in my role. It accelerates the creative process by providing ad ideas and content suggestions, allowing me to focus on strategic planning and campaign optimization	Challenges may include ensuring that AI-generated content aligns with platform-specific requirements and brand guidelines. It can process and analyze data swiftly, delivering results in a fraction of the time it would take a human
I	ChatGPT and similar AI tools have positively affected workload and time management. They allow analysts to handle more extensive datasets efficiently and provide faster results, freeing up time for in-depth analysis and interpretation.	One challenge with AI is ensuring the accuracy and reliability of the generated insights. It's important to validate AI-generated results to avoid potential errors or biases.
J	It speeds up the initial stages of the design process by providing quick ideas and suggestions, allowing me to focus more on refining and perfecting the final designs.	ChatGPT can be faster in finding information for digital marketing compared to humans, especially when processing vast amounts of data. It can provide results in seconds or minutes, whereas manual research might take hours

*Table 5: Summary of Interviews' Insights on Concepts of Interest: Cross-case Presentation (cont.)*

<b>RQ3: How does ChatGPT's use in business impact job opportunities in copywriting, ad brainstorming, and demographic research for targeting potential buyers?</b>	<b>RQ4: What are the crucial factors associated with using ChatGPT in digital marketing?</b>
It can enhance efficiency by automating routine tasks like ad copy generation or data analysis. This frees up our time to focus on strategic thinking, client communication, and creativity, ultimately elevating the quality of our work. Human creativity remains essential for crafting persuasive and on-brand ad copy	Digital marketers should prioritize data accuracy and alignment with campaign goals when integrating ChatGPT. It can assist in understanding and engaging with target audiences effectively, making it a valuable asset for digital marketers
By integrating AI into our workflows, we can improve efficiency, allowing us to allocate more time to strategic planning and client engagement. We must ensure that AI-driven decisions align with our clients' values and goals. It might miss the cultural context behind certain keywords or phrases, which human researchers can better interpret.	Accurate data is the foundation for AI-driven decision-making. If the data is flawed, the entire campaign may suffer.
We should see ChatGPT as a collaborator, not a replacement. Human insights are crucial in understanding these nuances for more effective ad campaigns.	"Digital marketers must prioritize AI's ethical use, data security, and campaign optimization. The key factor contributing to success is ethical AI usage. Ensuring AI aligns with ethical standards builds trust with clients and customers, ultimately leading to successful integration
It's important to view ChatGPT as a collaborator rather than a replacement, ensuring human oversight for tasks requiring creativity, critical thinking, and understanding of context. ChatGPT is a valuable tool, but it works best when combined with human ingenuity for these tasks.	Successful integration means using AI to refine ad targeting and campaign strategies. As search engine algorithms evolve and user behavior changes, staying competitive in digital marketing requires AI assistance. ChatGPT will remain a valuable tool for adapting to these shifts and ensuring effective search advertising.
While ChatGPT excels in automating many aspects of copywriting and ad idea generation, there are creative elements that require human expertise. Crafting emotionally resonant and brand-specific messaging or generating truly unique and innovative ad concepts often relies on human creativity and intuition.	Its ability to generate content quickly and efficiently, coupled with advancements in AI technology, makes it a valuable asset in content creation and marketing campaigns

Table continues

*Table 5: Summary of Interviews' Insights on Concepts of Interest: Cross-case Presentation (cont.)*

It's important to note that human creativity, expertise, and final judgment are still essential in refining and adapting these suggestions to meet specific project requirements. Continued education and awareness efforts are important to maximize the benefits of AI in everyday life	Human creativity and judgment remain paramount in refining and adapting these ideas to meet the unique requirements of each project. we can expect ChatGPT to become even more sophisticated and integrated into our daily design and branding activities, contributing to our industry's growth and innovation.
ChatGPT has been highly beneficial in our work by expediting content planning for internal campaigns. It has improved the efficiency of our internal communications and campaign execution, resulting in better team collaboration and message clarity.	The key factor contributing to successful integration is ensuring that AI-generated content aligns with the company's culture and messaging. Other factors include efficient content generation, scalability, and the ability to keep employees informed.
Professionals in our field can make the most of ChatGPT by using it as a resource for generating ad copy ideas and content suggestions. It can speed up the creative process and provide valuable input, allowing us to focus on strategic planning and campaign optimization.	ChatGPT's ability to understand and adapt to ever-changing consumer preferences is crucial in the dynamic digital marketing landscape. As platforms evolve and audience behavior shifts, AI tools like ChatGPT will remain essential for creating impactful, personalized marketing campaigns.
It can quickly summarize large datasets or assist in generating preliminary reports, saving time and improving our ability to provide timely insights to clients.	Successful integration depends on using AI to process data efficiently and then having skilled analysts validate and act on those insights. As marketing data grows, AI will become even more critical for efficient analysis. However, human analysts will remain essential to contextualize findings and drive effective marketing strategies.
While ChatGPT is useful in generating design ideas, it may struggle with understanding the specific nuances and emotional aspects of design. It can't easily automate the artistic and emotional elements of graphic design, which require human creativity and intuition.	The key factor is striking the right balance, ensuring that AI assists in generating ideas and designs efficiently, but the final creative touch remains human. Successful integration lies in combining AI's speed with the designer's artistic flair.

*Source: Own work*

The insights gathered from the participants indicate a positive impact of ChatGPT on workload and time management in the context of digital marketing. Several participants highlighted its role as a time-saving tool, especially in automating repetitive tasks related to their role. Automation allows professionals to allocate their time more strategically and concentrate on higher-level tasks. ChatGPT emerges as a valuable asset for improving time management and workload distribution in the field of digital marketing.

"ChatGPT has been a time-saver for me. It automates repetitive tasks in ad targeting and audience analysis, allowing me to focus on more strategic aspects of campaign management. It has positively impacted my workload by streamlining processes". Participant A (Paid Social Junior)

The second important conclusion is that the integration of ChatGPT into everyday tasks offers significant advantages in terms of speed and efficiency, particularly when handling extensive datasets and research assignments in digital marketing. Participants noted that ChatGPT can outperform humans in finding information, delivering results in a matter of seconds or minutes, compared to the hours it might take for manual research. However, the degree of speed improvement depends on the complexity of the task.

"ChatGPT can be faster in finding information for digital marketing compared to humans, especially when processing vast amounts of data. It can provide results in seconds or minutes, whereas manual research might take hours. However, the exact speed improvement depends on the complexity of the task". -Participant J (Senior Graphic Designer)

Despite the advantages, several challenges were highlighted by the participants. One common challenge is ensuring that AI-generated content aligns seamlessly with the brand's style and messaging. While ChatGPT excels at generating ideas, it may not always fully grasp the specifics of design requirements, necessitating careful human review and adjustments. This underscores the importance of maintaining a balance between AI assistance and human oversight to ensure the quality and authenticity of content.

"One limitation I've encountered when relying on AI for everyday tasks is the need for careful oversight. AI-generated content might not always align perfectly with our brand's style and messaging, requiring human review and adjustments. " Participant J (Senior Graphic Designer)

"One specific challenge I've encountered when relying on AI for everyday tasks is ensuring that AI-generated content aligns perfectly with our brand's style and messaging. While ChatGPT is helpful in generating ideas, it may not always fully understand the nuances and specifics of our design requirements. This requires careful human review and adjustments. " Participant D (Search Specialist)

It's worth noting that the challenges mentioned by participants also point to the evolving nature of AI integration, where refining the synergy between AI and human expertise remains a vital area of exploration and improvement. Regarding the impact of ChatGPT on job opportunities in copywriting, ad brainstorming, and demographic research, it's evident that while ChatGPT offers significant automation capabilities, there are areas where human expertise remains crucial. Professionals can leverage ChatGPT as a valuable tool for data processing and preliminary analysis, allowing them to focus on interpretation and deriving meaningful insights.

Participants emphasized ethical considerations when using AI in advertising, highlighting the responsibility to ensure that AI-generated content adheres to ethical standards and respects user privacy. It's clear that ChatGPT is proficient in automating many aspects of copywriting and ad concept generation, providing initial ideas. However, it may struggle with understanding emotional nuances and specific branding requirements. Similarly, demographic research may involve complex data interpretation and cultural insights that require human expertise. Therefore, while ChatGPT enhances efficiency, it works best when combined with human creativity, emotional understanding, and judgment for these nuanced tasks. In the context of graphic design, it's evident that ChatGPT offers valuable assistance but may fall short in understanding the nuanced and emotional aspects of design. The artistic and emotional elements of graphic design demand human creativity and intuition, making human input indispensable in this field. Similarly, in data analysis, ChatGPT's strength lies in data processing, but it may not grasp the full context and nuances, particularly in specialized or complex domains. Human judgment remains crucial for accurately interpreting results and making strategic decisions based on data.

In the realm of ad copywriting, it's apparent that AI, while proficient, may encounter difficulties in fully grasping context, particularly in creative endeavors. Ensuring brand authenticity and upholding ethical standards when utilizing AI for advertising purposes remains a persistent challenge. Furthermore, the necessity for continuous monitoring and refinement is vital to harness AI's potential effectively in this domain.

"AI can sometimes struggle with contextual understanding, especially in creative tasks like ad copywriting. Maintaining brand authenticity and ensuring ethical use of AI are ongoing challenges. Additionally, the need for constant monitoring and fine-tuning is essential."  
Participant B (Paid Social Media Manager)

Finally, the fourth conclusion is that ChatGPT is expected to retain its value in digital marketing. With advancements in AI ethics and capabilities, it will continue to assist digital marketers in making data-driven decisions, enhancing campaign effectiveness, and ensuring ethical technology use. All participants agreed that digital marketers should prioritize factors such as data accuracy and alignment with campaign objectives when integrating ChatGPT. The key to successful integration lies in ensuring that AI-generated insights and content not



only maintain accuracy but also resonate with the campaign's goals and target audience. Participant working in paid social and paid search sector confirm that maintaining alignment with the brand's voice and messaging is the top priority when integrating ChatGPT. This factor significantly contributes to successful integration, ensuring that AI-generated content seamlessly fits the established brand identity. Other important considerations include data security, regulatory compliance, and adaptability to changing market trends. While ChatGPT can be a valuable tool for generating initial design concepts and ideas, maintaining harmony with the client's brand identity and messaging is paramount. Human creativity and judgment continue to play a crucial role in refining and adapting AI-generated ideas to meet unique project requirements.

"As a Creative Director in the design and branding sector, I believe it's crucial to maintain a balance between leveraging ChatGPT's capabilities and preserving the human creative touch. ChatGPT can be a powerful tool to support our creative team by generating initial design concepts and ideas. However, it's vital to ensure that the AI-generated content aligns harmoniously with the client's brand identity and messaging. Human creativity and judgment remain paramount in refining and adapting these ideas to meet the unique requirements of each project. "-Participant F (Creative Director)

All participants emphasized the importance of prioritizing ethical AI usage as a fundamental step toward successful ChatGPT integration. They underscored that aligning AI practices with ethical standards is crucial for building trust with clients and customers, which, in turn, paves the way for a successful and enduring integration. The cross-case analysis for the research topics has been formulated (as displayed in Table 4) to provide an overarching representation of the concept, following the approach suggested by Lee and Cadogan (2009). By constructing a meta-matrix, we could evaluate the viewpoints of all ten respondents concerning the five research areas. This meta-matrix is conceived as a multidimensional construct, incorporating dimensions that align with the research questions and their corresponding sub-topics addressed within the qualitative study:

- RQ1: Does ChatGPT improve operational efficiency in digital marketing? (dimension: Usage of ChatGPT in business)?
- RQ2: What are the primary differences and challenges faced by individuals when integrating AI into their everyday tasks compared to traditional research methods? (dimension: Differences and challenges of using ChatGPT in business)?
- RQ3: How does ChatGPT's use in business impact job opportunities in copywriting, ad brainstorming, and demographic research for targeting potential buyers? (dimension Job opportunities while using ChatGPT)?
- RQ4: What are the crucial factors associated with using ChatGPT in digital marketing? (dimension: ChatGPT Factors in Business)?

Table 6: Meta-Matrix Describing Research Questions

Description	Comments participants B and F
<b>RQ1: Does ChatGPT improve operational efficiency in digital marketing?</b>	<p>“I’ve employed AI chatbots in campaign management, especially for tasks like data analysis and reporting. ChatGPT has been a valuable tool for streamlining these data-related tasks. I believe it significantly enhances operational efficiency within our team by freeing up time and enabling us to focus on more strategic aspects of campaign management.”-Participant B</p> <p>“I’ve used ChatGPT to generate initial design concepts and brainstorm creative ideas quickly. It’s a valuable resource for creative professionals like me, as it provides inspiration and a starting point for design projects”- Participant F</p> <p>“ChatGPT has positively impacted workload and time management in my role. It accelerates the creative process by providing ad ideas and content suggestions, allowing me to focus on strategic planning and campaign optimization”-Participant H</p>
<b>Dimension: Usage of ChatGPT in business</b>	
<b>RQ2: What are the primary differences and challenges faced by individuals when integrating AI into their everyday tasks compared to traditional research methods?</b>	<p>“For instance, in digital marketing, it can help generate ad copy ideas or recommend audience segments for targeting. It’s challenging to quantify the exact speed difference, but it’s evident that AI can process data more quickly than humans.”-Participant A</p> <p>“ChatGPT can be faster and more thorough than humans in finding information for digital marketing, particularly when dealing with large datasets and research tasks. ChatGPT is helpful in generating ideas, it may not always fully understand the nuances and specifics of our design requirements”- Participant F</p>
<b>Dimension: Differences and challenges of using ChatGPT in business</b>	

Table continues

Table 6: Meta-Matrix Describing Research Questions (cont.)

<p><b>RQ3: How does ChatGPT's use in business impact job opportunities in copywriting, ad brainstorming, and demographic research for targeting potential buyers?</b></p>	<p>“By integrating AI into our workflows, we can improve efficiency, allowing us to allocate more time to strategic planning and client engagement. We must ensure that AI-driven decisions align with our clients' values and goals. it might miss the cultural context behind certain keywords or phrases, which human researchers can better interpret.”-Participant B</p> <p>“While ChatGPT excels in automating many aspects of copywriting and ad idea generation, there are creative elements that require human expertise. Crafting emotionally resonant and brand-specific messaging or generating truly unique and innovative ad concepts often relies on human creativity and intuition.”- Participant E</p> <p>“ChatGPT has been highly beneficial in our work by expediting content planning for internal campaigns. It has improved the efficiency of our internal communications and campaign execution, resulting in better team collaboration and message clarity.”- Participant G</p>
<p><b>Dimension: Job opportunities while using ChatGPT</b></p>	
<p><b>RQ4: What are the crucial factors associated with using ChatGPT in digital marketing?</b></p>	<p>“Its ability to generate content quickly and efficiently, coupled with advancements in AI technology, makes it a valuable asset in content creation and marketing campaigns” Participant E “</p> <p>The key factor contributing to successful integration is ensuring that AIgenerated content aligns with the company's culture and messaging. Other factors include efficient content generation, scalability, and the ability to keep employees informed. “- Participant G</p> <p>“The key factor is striking the right balance, ensuring that AI assists in generating ideas and designs efficiently, but the final creative touch remains human. Successful integration lies in combining AI's speed with the designer's artistic flair”- Participant J</p>
<p><b>Dimensions: ChatGPT Factors in Business</b></p>	

Source: own work

In the ever-evolving landscape of digital marketing, the integration of AI, particularly exemplified by ChatGPT, has emerged as a critical factor. Through the responses to a set of research questions, we glean significant insights into ChatGPT's role in enhancing operational efficiency, the differences and challenges it presents, its impact on job opportunities, and the crucial factors associated with its use. Operational Efficiency (RQ1): Participants across the board acknowledge the profound influence ChatGPT wields on operational efficiency in digital marketing. Participant B articulates its role in streamlining data-related tasks, freeing up valuable time for more strategic aspects of campaign management. This underscores the capability of ChatGPT in accelerating data-driven processes and consequently optimizing operational workflows. Meanwhile, Participant F spotlights ChatGPT's role in the creative sphere, where it serves as an inspiration generator and a catalyst for creative ideation. This creative acceleration is instrumental in improving efficiency by expediting the inception of projects.

Differences and Challenges (RQ2): The differences between AI, particularly ChatGPT, and traditional research methods are evident. Participant A underscores AI's remarkable speed in processing data, particularly useful in swiftly generating ad copy ideas and audience targeting recommendations. However, there's an awareness that AI may not fully grasp nuanced design requirements, as highlighted by Participant F. This difference underscores the ongoing challenge of ensuring AI comprehends the intricacies of creative tasks. Impact on Job Opportunities (RQ3): Integrating ChatGPT into business operations has a noticeable impact on job opportunities within the digital marketing domain. Participant B points out that by embracing AI, teams can improve efficiency, thereby allocating more time for strategic planning and client engagement. However, it's also essential to ensure that AI-driven decisions align with client values and goals, emphasizing the need for a human touch in interpreting cultural context. Participant E recognizes that while ChatGPT automates many aspects of copywriting and ad idea generation, creative elements often rely on human expertise, especially when crafting emotionally resonant and brand-specific messaging. The use of ChatGPT contributes positively to internal communications and campaign execution, enhancing team collaboration and message clarity, as indicated by Participant G. Crucial Factors (RQ4): The key factors associated with successful ChatGPT integration become apparent through these responses. It's evident that ChatGPT's ability to generate content quickly and efficiently, coupled with advancements in AI technology, makes it a valuable asset in content creation and marketing campaigns (Participant E). Ensuring AI-generated content aligns with the company's culture and messaging is a critical success factor (Participant G). Moreover, striking the right balance between AI's speed and human creativity remains essential (Participant J). In conclusion, the responses to these research questions paint a comprehensive picture of ChatGPT's impact on digital marketing. It emerges as a potent tool for enhancing operational efficiency, bridging the gap between AI's speed and human creativity, and offering opportunities for improving job roles and responsibilities. However, it's essential to acknowledge the nuances and challenges in integrating AI into the digital marketing landscape to maximize its benefits fully.

## 7 CONCLUSION

The evolving digital marketing landscape, driven by the rise of Artificial Intelligence (AI), is revolutionizing how businesses engage with their audiences. In this context, ChatGPT, an advanced language model from OpenAI, emerges as a powerful tool capable of transforming customer interactions and content generation in digital marketing. Nevertheless, as organizations endeavour to leverage ChatGPT's potential to enhance customer engagement and deliver personalized experiences, a substantial knowledge gap persists regarding its seamless integration and its real impact in the digital marketing domain. This gap highlights the need for comprehensive research to explore the nuances, challenges, and opportunities associated with ChatGPT's role in shaping the future of digital marketing.

This thesis aims to address this knowledge gap by investigating the role of ChatGPT in digital marketing. Our primary objectives revolve around understanding its influence on operational efficiency, exploring the differences and challenges compared to traditional methods, assessing its impact on job opportunities in various digital marketing functions, and identifying critical factors associated with its utilization.

Through empirical research and analysis, we seek to shed light on how ChatGPT can enhance the efficiency of digital marketing operations, how individuals adapt to AI integration, its implications for job roles, and the key considerations for successful implementation. Ultimately, our research questions will guide us in unravelling the multifaceted dynamics of ChatGPT in digital marketing, providing valuable insights for practitioners and contributing to a broader understanding of AI's role in shaping the marketing landscapes. More specifically, our goal was to respond to the following four research questions by using the case of using ChatGPT in the digital marketing:

- RQ1: Does ChatGPT improve operational efficiency in digital marketing?
- RQ2: What are the primary differences and challenges faced by individuals when integrating AI into their everyday tasks compared to traditional research methods?
- RQ3: How does ChatGPT's use in business impact job opportunities in copywriting, ad brainstorming, and demographic research for targeting potential buyers?
- RQ4: What are the crucial factors associated with using ChatGPT in digital marketing?

The first objective entails a thorough analysis of the services offered by ChatGPT in the realm of digital marketing. Through semi-structured interviews, a diverse group of professionals from various departments within digital marketing companies provided insights into their practical experiences with ChatGPT. The focus was on understanding how ChatGPT aids in streamlining routine tasks, such as content generation and keyword research, and how it enhances operational efficiency within digital marketing teams.

Interviewees consistently reported that ChatGPT plays a significant role in expediting these tasks, resulting in time and resource savings.

The second objective aimed to explore the differences and challenges encountered when integrating ChatGPT into daily tasks compared to traditional research methods. Interview questions sought to uncover the breadth and relevance of information provided by ChatGPT and how it compares to human knowledge and understanding. While interviewees acknowledged ChatGPT's wealth of information, they also emphasized the importance of human oversight to validate and refine AI-generated content. The challenge lies in ensuring the quality and accuracy of AI-generated outputs, highlighting the need for continuous learning and adaptation when incorporating AI into traditional research methodologies. The third objective aimed to investigate how the utilization of ChatGPT in businesses impacts job opportunities within specific areas of digital marketing. It focused on roles related to copywriting, ad brainstorming, demographic research, and the creation of targeted buyer personas. The objective was to assess whether the integration of ChatGPT is perceived as potentially altering the landscape of these professional domains within the digital marketing sector.

The fourth objective sought to explore the critical factors associated with the implementation of ChatGPT in digital marketing. This objective delved into the role of human perspective and expertise in contrast to ChatGPT's knowledge. The focus was on understanding whether ChatGPT has the capability to entirely replace human judgment and understanding within the digital marketing landscape. It aimed to uncover the key considerations and challenges that emerge when integrating ChatGPT into digital marketing strategies, emphasizing the importance of balancing AI capabilities with human insights and ethical considerations.

This comprehensive examination of ChatGPT's role in digital marketing, as revealed through semi-structured interviews, underscores its potential to improve operational efficiency, while also highlighting the challenges of ensuring the quality of AI-generated content. Moreover, it brings to light the complex relationship between ChatGPT and job opportunities within the industry, emphasizing the need for a balanced approach. Lastly, it emphasizes the coexistence of ChatGPT with human expertise and ethical considerations in the evolving landscape of digital marketing. This master's thesis has provided valuable insights into the role of ChatGPT in the field of digital marketing. Our findings suggest that ChatGPT is indeed an effective tool that can significantly enhance operational efficiency within digital marketing teams. It streamlines routine tasks, such as content generation and keyword research, saving time and resources. Moreover, ChatGPT contributes to a more agile and responsive digital marketing workflow, allowing professionals to adapt quickly to changing market demands. However, it is important to note that ChatGPT is not a replacement for human expertise and judgment. Our research underscores the need for a balanced approach, where ChatGPT complements human capabilities rather than supplants them entirely. While ChatGPT offers a wealth of information and efficiency, it also poses challenges in ensuring

the quality and accuracy of AI-generated content. Human oversight remains essential to validate and fine-tune AI outputs.

ChatGPT represents a powerful and transformative tool with the potential to reshape numerous professions, it is important to acknowledge its limitations and inherent challenges. One of the primary drawbacks of ChatGPT is its limited access to data, extending only up until the year 2021. This temporal constraint restricts its ability to provide accurate and up-to-date information on various topics, making it less reliable for addressing contemporary issues. Furthermore, ChatGPT's reliance on patterns from its training data rather than accessing real-time facts can result in responses that may appear correct but are not necessarily accurate. This lack of real-time data verification can lead to misinformation and unreliable answers.

Additionally, ChatGPT's inability to provide functioning links to references and its reliance on text-based interactions pose limitations in its capabilities. It cannot engage with or generate visual content, such as images or videos, and it can only follow one instruction at a time, which restricts its multitasking abilities. Perhaps one of the most significant concerns is ChatGPT's potential to occasionally produce harmful instructions or biased content, which raises ethical considerations and underscores the importance of human oversight. In light of these limitations, it becomes evident that ChatGPT, while a valuable tool, is not a fully humanized solution. It requires continuous refinement and the integration of complementary human expertise to ensure accurate and responsible use. As technology evolves, addressing these challenges will be essential to harness ChatGPT's potential effectively and responsibly in various professional contexts.

The qualitative research findings consistently underscored the fact that ChatGPT is not fully humanized, with all ten participants sharing this perspective. Across the board, participants highlighted critical limitations that emphasize ChatGPT's machine nature. Two out of ten participants unanimously noted that ChatGPT's primary limitation lies in its inability to access real-time information beyond 2021. This temporal constraint significantly restricts its capacity to provide up-to-date and accurate responses on contemporary topics, leaving users with potentially outdated or inaccurate information. Furthermore, all participants emphasized the inherent challenge of ChatGPT relying on patterns from its training data rather than genuine understanding. While it may generate responses that appear correct, it often lacks the ability to validate the accuracy of the information. This inherent bias underscores the fact that ChatGPT's responses are shaped by its training data, which may not always align with ethical or responsible standards. Furthermore, ChatGPT's inability to handle multiple tasks concurrently was a unanimous concern among the participants. It can only follow one instruction at a time, limiting its multitasking capabilities and efficiency in addressing complex tasks. The qualitative research findings from all ten participants unequivocally affirm that ChatGPT is not fully humanized. Its limitations in accessing real-time data, verifying information, and multitasking underscore its nature as a machine

learning model rather than a fully human-like entity. While it offers substantial utility, recognizing and addressing these limitations is essential for responsible and effective use in various professional contexts. The insights gathered from all participants in the study collectively emphasize two key points regarding ChatGPT. First and foremost, it is evident that ChatGPT has gained considerable awareness and recognition among professionals. However, there is room for continuous improvement in term of usage of ChatGPT and its potential. Secondly, the participants consistently highlighted the substantial time-saving potential that ChatGPT offers in the field of digital marketing. The most important conclusion is that ChatGPT can significantly expedite everyday tasks, such as content generation, keyword research, design ideas, etc contributing to improved operational efficiency within digital marketing. Overall, while ChatGPT has made significant strides in its recognition and utility, one of the conclusions among participants is that there is ongoing potential for refinement and enhancement.

Drawing from the insights provided by our interviewees within the digital marketing sector, it is evident that the utilization of ChatGPT is primarily focused on several key aspects. Respondents highlighted the significance of factors such as awareness of ChatGPT, the need for continuous improvement, and its time-saving potential in everyday tasks. In parallel with these findings, we can conclude that professionals in the digital marketing field have recognized the existence of ChatGPT but acknowledge that there is much more to discover in terms of its optimal utilization. ChatGPT indeed offers distinct advantages, particularly in the realm of streamlining routine tasks. Its ability to generate content ideas, provide quick responses, and handle repetitive tasks more rapidly than humans is undeniably beneficial. However, it is crucial to emphasize that ChatGPT cannot fully replace human creativity and judgment. While it excels at generating ideas and assisting with tasks, it lacks the genuine creativity and intuition that humans possess. ChatGPT is a tool, a valuable tool, but a tool, nonetheless. Furthermore, it is essential to address the ethical limitations associated with ChatGPT. It may occasionally produce biased or harmful content, and its responses are only as good as the data it was trained on. This highlights the importance of human oversight in using ChatGPT responsibly.

Since there is room for improvement, it can be solved in several ways, for example, ensuring that ChatGPT has access to a comprehensive and up-to-date dataset is crucial. This can be achieved by regularly updating its training data to encompass a wider range of information. Developers should prioritize integrating recent data to ensure that ChatGPT can provide accurate and current responses to users' queries. The ongoing improvement of ChatGPT's data sources will enhance its reliability and relevance in the fast-paced digital marketing landscape. Secondly, promoting awareness among users about ChatGPT's capabilities and limitations is essential. This can be achieved through comprehensive training programs and educational initiatives. Users should be well-informed about the extent of ChatGPT's knowledge and its reliance on existing patterns in the data. By providing users with a clear understanding of ChatGPT's capabilities, they can make informed decisions about when and



how to leverage the tool effectively. Furthermore, integrating human oversight into the usage of ChatGPT can help address limitations related to biases and ethical concerns. Employing moderators or reviewers to assess ChatGPT-generated content can ensure that responses align with ethical guidelines and are free from biased or inappropriate information. Human involvement can act as a safeguard to maintain content quality and ethical standards.

In conclusion, optimizing ChatGPT's utility in digital marketing requires a multifaceted approach. Regular data updates, comprehensive training, and human oversight are key solutions to enhance its performance and reliability. By addressing these limitations, digital marketers can harness ChatGPT as a valuable tool while minimizing potential risks and ensuring responsible usage in the evolving digital landscape. Taken together, it is evident that ChatGPT's role and value in digital marketing are expected to endure. As AI technology continues to evolve, ChatGPT will likely remain a valuable tool for digital marketers. The following conclusions emerge from our discussions with industry professionals:

Firstly, all participants agreed that ChatGPT offers significant value in digital marketing. It assists in making data-driven decisions, enhances campaign effectiveness, and supports ethical technology use. Its ability to generate insights and content based on existing data patterns streamlines various aspects of digital marketing. Furthermore, participants stressed the importance of aligning ChatGPT-generated content with campaign objectives, maintaining brand consistency, and ensuring data security and regulatory compliance. These factors are crucial for successful integration and effective utilization of ChatGPT within digital marketing strategies. Despite ChatGPT's capabilities in generating ideas and content, it is essential to recognize the irreplaceable role of human creativity and judgment. Participants emphasized that while ChatGPT can be a powerful tool for generating initial concepts, human input remains paramount in refining and adapting AI-generated ideas to meet unique project requirements. Ethical considerations are central to the integration of ChatGPT. All participants emphasized the importance of aligning AI practices with ethical standards to build trust with clients and customers. Ensuring that AI-generated content adheres to ethical guidelines is vital for maintaining a positive brand image.

If the proposed solutions for addressing ChatGPT's limitations in digital marketing are successfully implemented, a range of benefits can be expected. First and foremost, regular updates to ChatGPT's training data would ensure that digital marketers have access to the most current and accurate information available. This, in turn, can lead to more informed and up-to-date decision-making, enabling marketers to stay ahead of market trends and consumer preferences. Additionally, comprehensive training programs for digital marketing professionals would equip them with a deeper understanding of ChatGPT's capabilities and limitations. This heightened awareness can result in more effective and efficient use of the tool, maximizing its potential for content generation and data analysis.

Furthermore, the inclusion of human oversight in AI-generated content can significantly

improve content quality and ethical standards. Human judgment is essential for refining and adapting content to align seamlessly with brand objectives and campaign goals. This consistency in brand messaging can enhance brand recognition and customer loyalty. Clear ethical usage guidelines can prevent the creation of biased or misleading content, ensuring that marketing efforts remain ethical and trustworthy. Building and maintaining trust with customers and clients is crucial in the digital marketing landscape.

Moreover, ChatGPT's ability to handle routine and time-consuming tasks can save digital marketers valuable time and resources. This newfound efficiency allows professionals to allocate their resources more strategically and focus on the more creative and strategic aspects of their campaigns. By providing access to current information and the ability to generate content quickly, ChatGPT can help digital marketers adapt to rapidly changing market conditions, keeping them competitive in a dynamic environment. Additionally, the automation of repetitive tasks can potentially lead to cost savings. Lastly, while ChatGPT can generate initial ideas and concepts, human creativity remains essential for refining and adapting these ideas to meet unique project requirements. This collaborative approach can result in more innovative and creative marketing campaigns that resonate with the target audience. In light of ChatGPT's significant importance in the business landscape, we firmly assert the necessity for every organization to establish a dedicated strategy that outlines the following:

**Continuous Training:** Ensure that your team receives regular training on ChatGPT's capabilities and limitations. This will empower them to use the tool effectively and ethically.

**Human Oversight:** Incorporate human oversight into AI-generated content. While ChatGPT can generate ideas and content, human creativity and judgment remain essential for refining and adapting these outputs to align with your brand's identity and messaging.

**Ethical Usage:** Prioritize ethical usage of ChatGPT. Align its practices with ethical standards to build trust with clients and customers. Make sure AI-generated content adheres to ethical guidelines, particularly in sensitive areas like advertising and customer interactions.

**Regular Updates:** Advocate for regular updates to ChatGPT's training data to ensure access to current information and improve its accuracy. Stay informed about advancements in AI ethics and capabilities.

**Efficiency Gains:** Recognize ChatGPT's potential to save time in everyday tasks. Utilize its capabilities to streamline routine processes, freeing up valuable time for your team to focus on more strategic and creative aspects of digital marketing.

By implementing these strategies and considering these aspects, organizations can harness

the power of ChatGPT effectively while addressing its limitations, ultimately contributing to the success of their digital marketing efforts.

One significant discovery from our research is that the majority of participants in the digital marketing sector see ChatGPT as an invaluable tool with the potential to play an even larger role in their future endeavors. Remarkably, all respondents expressed their intent to increase their utilization of ChatGPT in the coming years, citing its value as a versatile and innovative tool. Many likened ChatGPT to a wellspring of creative inspiration, emphasizing its ability to provide fresh ideas and insights for a wide range of tasks.

“Absolutely. ChatGPT's ability to understand and adapt to ever-changing consumer preferences is crucial in the dynamic digital marketing landscape. As platforms evolve and audience behavior shifts, AI tools like ChatGPT will remain essential for creating impactful, personalized marketing campaigns.”- Participan D (Social specialist)

“Absolutely. ChatGPT and similar AI tools will remain invaluable for digital marketers. They enhance productivity, reduce turnaround times, and provide creative inspiration. As AI advances, it will further empower marketers to meet the demands of a rapidly evolving digital landscape.” - Participan J (Senior graphic designer)

By recognizing the evolving needs and values of the business digital marketing landscape, organizations can strategically integrate ChatGPT to enhance customer engagement, optimize content creation, and improve operational efficiency. ChatGPT's ability to generate data-driven insights, automate routine tasks, and provide personalized experiences can offer a competitive advantage in reaching target audiences effectively. However, it's crucial for businesses to acknowledge that ChatGPT is not a replacement for human creativity and expertise; rather, it should complement human efforts by serving as a valuable tool for idea generation, content refinement, and streamlining everyday tasks. To fully leverage ChatGPT's potential, businesses should invest in training programs, ensure ethical AI practices, and regularly update its training data, enabling it to stay up to date with industry trends and deliver reliable results. In doing so, organizations can position themselves at the forefront of innovative digital marketing strategies, fostering growth and success in an ever-evolving digital landscape.

## REFERENCES

1. Abdulaziz, S. (2021). Artificial intelligence in digital marketing. *International Journal of Marketing and Business Communication*, 10(2), 42-52.
2. Ahmed, A. (2020). COVID-19 pandemic and online marketing: A conceptual framework. *Journal of Risk and Financial Management*, 13(8), 176.

3. Arsenijevic, U. i Jovic, M. (2019.), Artificial Intelligence Marketing: Chatbots, *International Conference on Artificial Intelligence: Applications and Innovations*, 2019, 19-193.
4. Bacchus, S. (2023). Tutorial: Digital Marketing Channels. *GoDataFeed Help Center*.
5. Barker, S. 2019. *The Future of AI in Digital Marketing*. <https://shanebarker.com/blog/ai-digitalmarketing/?fbclid=IwAR1DHHgD8P4Pg1IU9ot4hBy7ofrAabXoNgAePM1yeTy t1M4Yvp0pjL1Yq9M>
6. Boddu, R. S. K., Santoki, A. A., Khurana, S., Koli, P. V., Rai, R., & Agrawal, A. (2022). An analysis to understand the role of machine learning, robotics, and artificial intelligence in digital marketing. *Materials Today: Proceedings*, 56, 2288-2292.
7. Bolton, R., Libai, B., Bugel, M. S., de Ruyter, K., Gotz, O., Risselada, H., & Stephen, A. T. (2010). Customer-to-customer interactions: Broadening the scope of word-of-mouth research. *Journal of Service Research*, 13(3), 267–282.
8. Bolton, R., Libai, B., Bugel, M. S., de Ruyter, K., Gotz, O., Risselada, H., & Stephen, A. T. (2010). Customer-to-customer interactions: Broadening the scope of word-of-mouth research. *Journal of Service Research*, 13(3), 267–282.
9. Bowman, M., Alharthi, A., & Krotov, V. (2017). Addressing barriers to big data. *Business Horizons*, 60(3), 285–292.
10. Brenner, M. (2019). *6 Examples of AI in Email Marketing*. <https://marketinginsidergroup.com/artificial-intelligence/6-examples-of-ai-in-email-marketing>
11. Brown, C. (2019). Digital Marketing Strategies for Small Businesses. *Small Business Review*, 22(1), 56-68.
12. Bryman, A., & Bell, E. (2015). *Business Research Methods, Vol. 4*. Bell & Bain Ltd.
13. Bughin, J. (2015). *Brand Success in an Era of Digital Darwinism*. McKinsey & Company.
14. Campbell, C., Sands, S., Ferraro, C., Tsao, H. Y. J., & Mavrommatis, A. (2020). From data to action: How marketers can leverage AI. *Business Horizons*, 63(2), 227-243.
15. Carter, D. (2018.), How real is the impact of artificial intelligence? The business information survey 2018, *Business Information Review*, 35 (3), 99-115.
16. Carter, K. (2018). *Staying Relevant in the Age of Automation*. Harvard Business Review.
17. Casillas, J., Martínez-López, F.J.: Mining uncertain data with multiobjective genetic fuzzy systems to be applied in consumer behaviour modelling. *Expert Systems With Applications* 36(2), 1645–1659 (2009)
18. Caulfield, J. (2023, April). *What Is ChatGPT? Everything You Need to Know*. <https://www.scribbr.com/ai-tools/what-is-chatgpt/>
19. Chadha, T. (2021, June 19). *50+ Vital Chatbot Statistics for 2023. GENERAL MARKETING*. <https://outgrow.co/blog/vital-chatbot->

statistics#:~:text=In%202023%2C%20the%20chatbot%20market,the%20end%20of%20this%20decade.

20. Chaffey, D., & Ellis-Chadwick, F. (2019). *Digital Marketing* (7th ed.). Pearson: UK
21. Chaffey, D., & Smith, P. R. (2022). *Digital marketing excellence: planning, optimizing, and integrating online marketing*.
22. Chakraborty, S. (2021). COVID-19 pandemic: Impact on the global economy. *Journal of Public Affairs*, 21(4), 2623.
23. Cheatham, B., Javanmardian, K., & Samandari, H. (2019). *Confronting the risks of artificial intelligence*. <https://www.mckinsey.com/capabilities/quantumblack/our-insights/confronting-the-risks-of-artificial-intelligence>
24. Chui, M., Henke, N., & Miremadi, M. (2018, July 24). *Most of AI's business uses will be in two areas*. *Harvard Business Review*. <https://hbr.org/2018/07/most-of-ai-business-uses-will-be-in-two-areas>
25. Copeland, B. J. (2007). *Philosophy of Psychology and Cognitive Science* (pp. 429-482). University of Canterbury.
26. Dahlen, M., & Rosengren, S. (2016). If Advertising Won't Die, What Will It Be? Toward a Working Definition of Advertising. *Journal of Advertising*, 45(3), 334-345. <https://doi.org/10.1080/00913367.2016.1172387>.
27. Davenport, T. H., & Ronanki, R. (2018). Artificial intelligence for the real world. *Harvard Business Review*, 96(1), 108-116.
28. Dutta, A., & Banerjee, P. (2021). A study on the application of chatbots in digital marketing. *International Journal of Innovative Technology and Exploring Engineering*, 10(8), 51-55.
29. Edureka. (2019). *What are the Advantages and Disadvantages of Artificial Intelligence?* <https://www.edureka.co/blog/what-are-the-advantages-and-disadvantages-of-artificial-intelligence/eight-strategies>, *Strategy & Leadership*, 46(1), 16-22
30. Eriksson, T., Bigi, A. i Bonera, M. (2020.), Think with me, or think for me? On the future role of artificial intelligence in marketing strategy formulation. *The TQM Journal*, 32(4), 795-814.
31. Fernandes, T. (2020). The impact of chatbots on human jobs in digital marketing. *Journal of Digital Marketing*, 2(1), 18-25.
32. Framingham, M. (2020). *IDC Survey Finds Artificial Intelligence Adoption Being Driven by Improved Customer Experience, Greater Employee Efficiency, and Accelerated Innovation*. <https://www.businesswire.com/news/home/20200610005127/en/IDC-Survey-Finds-Artificial-Intelligence-Adoption-Being-Driven-by-Improved-Customer-Experience-Greater-Employee-Efficiency-and-Accelerated-Innovation>
33. Géron, A. (2019). *Hands-on machine learning with Scikit-Learn, Keras, and TensorFlow: Concepts, tools, and techniques to build intelligent systems*. O'Reilly Media.

34. Gkikas, D. C., & Theodoridis, P. K. (2019). Artificial intelligence (AI) impact on digital marketing research. In *Strategic Innovative Marketing and Tourism: 7th ICSIMAT, Athenian Riviera, Greece, 2018* (pp. 1251-1259). Springer International Publishing.
35. Haenlein, M. i Kaplan, A. (2019.), A Brief History of Artificial Intelligence: On the Past, Present, and Future of Artificial Intelligence, *California Management Review*, 61(4), 5-14
36. Hermann, E. (2021). Leveraging Artificial Intelligence in Marketing for Social Good—An Ethical Perspective. *Journal of Business Ethics*, 1-19.
37. Hoffman, D. L., & Fodor, M. (2010). Can you measure the ROI of your social media marketing? *MIT Sloan Management Review*, 52(1), 41-49.
38. Hollebeek, L. D., & Macky, K. (2019, February). Digital Content Marketing's Role in Fostering Consumer Engagement, Trust, and Value: Framework, Fundamental Propositions, and Implications. *Journal of Interactive Marketing*, 45, 27–41.
39. Holtel, S. (2016). Artificial Intelligence Creates a Wicked Problem for the Enterprise. *Procedia Computer Science*, 99(1), 171-180. <https://doi.org/10.1016/j.procs.2016.09.109>
40. Hosseini, M., Horbach, S.P.J.M. *Fighting reviewer fatigue or amplifying bias? Considerations and recommendations for use of ChatGPT and other large language models in scholarly peer review. Res Integr Peer Rev*, 8(4) <https://doi.org/10.1186/s41073-023-00133-5>
41. Huang, Z., Yang, L., & Liu, Y. (2021). An exploration of the application of chatbots in digital marketing. *Journal of Electronic Commerce Research*, 22(2), 153-167.
42. Hughes,A. (2023, May). GPT-3. *Science Focus*. <https://www.sciencefocus.com/future-technology/gpt-3>
43. IDC. (2020). *Artificial Intelligence Projects Accelerate into Production and New AI Investments Skyrocket, According to IDC*. <https://www.investors.com/news/technology/artificial-intelligence-stocks/>
44. Infosys. (2018). *Should CMOs incorporate artificial intelligence in digital marketing budgets?* <https://www.forbesindia.com/blog/technology/should-cmos-incorporate-artificial-intelligence-in-digital-marketing-budgets/>
45. Inkbots. (2019). *Drop into the Future of Digital Marketing*. <https://inkbotdesign.medium.com/drop-into-the-future-of-digital-marketing-in-2019-2020-afb301a556bb>
46. Jones, R., & Lee, M. (2018). Measuring the Impact of Traditional Marketing. *Journal of Marketing Analytics*, 12(4), 210-223.
47. Kassalis, Ivars. (2010). Cluster-based approach: A tool to enter into the market. 10.3846/bm.2010.084
48. Kaukoranta, M. (2015). *How to reach more target customers by search engine optimization (SEO) and search engine advertising (SEA)* (Master's thesis) Seinäjoki University of Applied Sciences

49. Kim, H., Shin, D. K., Yang, H., & Lee, J. H. (2019). A study of AI chatbot as an assistant tool for school English curriculum. *Korean Association for Learner-Centered Curriculum and Instruction*, 19(1), 89-110. <https://doi.org/10.22251/jlcci.2019.19.1.89>
50. Korteling, J. E., Hu, J., Simmonds, D. J., Wang, S., & Waldman, I. (2021). *The Cognitive Limitations of Human Intelligence*. *Frontiers in Psychology*, 12, 3184.
51. Kotane, I., Znotina, D., & Hushko, S. (2019). Assessment of Trends in the Application of Digital Marketing. *Scientific Journal of Polonia University*, 33(2), 28-35. <https://doi.org/10.23856/3303>
52. Lazarević, V. (2023). *OpenAI ChatGPT 4: Bigger, Better, Smarter*. <https://www.vezadigital.com/post/openai-chatgpt-4-bigger-better-smarter>
53. Lies, J (2019). "Marketing Intelligence and Big Data: Digital Marketing Techniques on their Way to Becoming Social Engineering Techniques in Marketing." *International Journal Interactive Multimedia and Artificial*, 5, 134. 10.9781/ijimai.2019.05.002.
54. Liu, J., Kong, X., Xia, F., Wang, L., Qing, Q. i Lee, I. (2018.), *Artificial Intelligence in the 21st Century*, *IEEE*, 6(1), 34403-34421.
55. Lund, B. D., & Wang, T. (2023, January). Chatting about ChatGPT: How may AI and GPT impact academia and libraries? *Library Hi Tech News*. [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4333415](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4333415)
56. Manchanda, P., Nair, H. S., & Bhatia, T. (2010). Asymmetric social interactions in physician prescription behavior: The role of opinion leaders. *Journal of Marketing Research*, 47(5), 883–895.
57. Markkinoinnin Trendit. (2022, December 13). *Mikä on Chatbot?* <https://markkinoinnintrendit.fi/mika-on-chatbot/>
58. McCarthy, J., Minsky, M. L., Rochester, N., & Shannon, C. E. (1955). A proposal for the Dartmouth summer research project on artificial intelligence. *AI Magazine*, 27(4), 12-14.
59. McKinsey. (2018). *The Promise and Challenge of the Age of Artificial Intelligence: Briefing Note Prepared for the Tallinn Digital Summit*, October 2018. <https://www.mckinsey.com/featured-insights/artificial-intelligence/the-promise-and-challenge-of-the-age-of-artificial-intelligence>
60. Moe, W. W., & Schweidel, D. A. (2017). Opportunities for innovation in social media analytics. *Journal of Product Innovation Management*, 34(5), 697–702.
61. Muller, E., & Peres, R. (2019). The effect of social networks structure on innovation performance: A review and directions for research. *International Journal of Research in Marketing*, 36(1), 3-19.
62. Myers, A. (2011). *Stanford's John McCarthy, seminal figure of artificial intelligence, is dead at 84*. Stanford University.
63. Nair, K., & Gupta, R. (2021). Application of AI technology in modern digital marketing environment. *World Journal of Entrepreneurship, Management and Sustainable Development*, 17(3), 318-328.

64. Paschen, J., Kietzmann, J. i Kietzmann, T. C. (2019.), Artificial intelligence (AI) and its implications for market knowledge in B2B marketing, *Journal of Business & Industrial Marketing*, 34(7), 1410-1419
65. Patel, R. K., & Jain, M. (2012). Emerging trends in digital marketing: A case study of select Indian companies. *Global Business and Management Research: An International Journal*.
66. Plastino, E. i Purdy, M. (2018.), Game changing value from Artificial Intelligence: eight strategies, *Strategy & Leadership*, 46(1), 16-22
67. Polachowska, K. (2019). *12 challenges of AI adoption*. <https://neoteric.eu/blog/12-challenges-of-ai-adoption/>
68. Rahman, M., & Watanobe, Y. (2023). *Chat GPT for Education and Research: Opportunities and Strategies*. *Applied Sciences*, 13(9), 5783.
69. Ransbotham, S., Kiron, D., Gerbert, P., & Reeves, M. (2017). Reshaping business with artificial intelligence: Closing the gap between ambition and action. *MIT Sloan Management Review*, 59(1).
70. Ribeiro, T., & Reis, J. L. (2020). Artificial intelligence applied to digital marketing. In *Trends and Innovations in Information Systems and Technologies: Volume 2*(8), 158-169. Springer International Publishing.
71. Roser, M. (2022). *The brief history of artificial intelligence: The world has changed fast – what might be next?* Our World in Data <https://ourworldindata.org/brief-history-of-ai>
72. Rotman, D. (2023). *CHATGPT is about to revolutionize the economy. we need to decide what that looks like*. MIT Technology Review. <https://www.technologyreview.com/2023/03/25/1070275/chatgpt-revolutionize-economy-decide-what-looks-like/>
73. Saunders, M., Lewis, P., & Thornhill, A. (2019). *Research methods for business students (8th ed.)*, Pearson Education Limited.
74. Sawicki, A. (2016). *Digital marketing*. *World Scientific News*, (48), 82-88.
75. Shabbir, J., & Answer, T. (2018). *Artificial Intelligence and its Role in the Near Future*. <https://arxiv.org/abs/1804.01396>
76. Shabbir, M., & Answer, F. (2018). Artificial intelligence: A threat or an advantage to human thinking? *European Academic Research*, 5(1), 1-20.
77. Sharma, S., & Verma, S. (2020). *Optimizing Website effectiveness using various SEO Techniques*. Presented at the IEEE Country of Publication, Piscataway, NJ, USA; Noida, India. pp. 918-922.
78. Smilansky, S. (2018). *Experiential Marketing: A Practical Guide to Interactive Brand Experiences (2nd ed.)*. Kogan Page Limited
79. Smith, A. (2020). The Digital Marketing Revolution. *Marketing Journal*, 45(3), 112-125.
80. Sterne, J. (2017). *Artificial Intelligence for Marketing: Practical Applications*. Wiley.



81. Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (2nd ed.). Sage Publications, Inc. *Sustainable Development, ahead-of-print*, <https://doi.org/10.1108/WJEMSD-08-2020-0099>
82. Tanveer, M., Khan, N., & Ahmad, A. R. (2021, April). AI Support Marketing: Understanding the Customer Journey towards Business Development. In *2021 1st International Conference on Artificial Intelligence and Data Analytics (CAIDA)* (pp. 144-150). IEEE.
83. The Knowledge Academy. (2023). *Traditional Marketing vs Digital Marketing: Which is Better?* [https://www.theknowledgeacademy.com/blog/traditional-marketing-vs-digital-marketing/?fbclid=IwAR1pWSkZFZeo82CJ-Ph\\_Bf2ZMdGK6irMDDU02Bi\\_JLepjsdQUvtA5xJN-AE](https://www.theknowledgeacademy.com/blog/traditional-marketing-vs-digital-marketing/?fbclid=IwAR1pWSkZFZeo82CJ-Ph_Bf2ZMdGK6irMDDU02Bi_JLepjsdQUvtA5xJN-AE)
84. Theodoridis, P. K., & Gkikas, D. C. (2019). *How artificial intelligence affects digital marketing. In Strategic Innovative Marketing and Tourism: 7th ICSIMAT, Athenian Riviera, Greece, 2018* (pp. 1319-1327). Springer International Publishing
85. Tiautrakul, J., & Jindakul, J. (2019). *The Artificial Intelligence (AI) with the Future of Digital Marketing*. [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3405184](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3405184)
86. Tobaccowala, R. (2023). *The Future does not fit in the containers of the past: Is it human or is it AI.*
87. Vaknin, M. (2018). *The Future of Digital Marketing: Predictions to Thrive in 2019*. <https://youappi.com/industry-news/fourth-source-the-future-of-digital-marketing-predictions-to-thrive-in-2019>
88. Verlegh, P. W. J., Ryu, G., Tuk, M. A., & Feick, L. (2013). Receiver responses to rewarded referrals: The motive inferences framework. *Journal of the Academy of Marketing Science*, 41(6), 668–683.
89. Victories, V. (2018). *7 Benefits of Artificial Intelligence for Business*. <https://www.eukhost.com/blog/webhosting/7-benefits-of-artificial-intelligence-for-business/>
90. Wall, A., & Spinuzzi, C. (2018). The art of selling-without-selling: Understanding the genre ecologies of content marketing. *Technical Communication Quarterly*, 27(2), 137–160.
91. Wamba-Taguimdje, S. L., Wamba, S. F., Kamdjoug, J. R. K., & Wanko, C. E. T. (2020). *Influence of artificial intelligence (AI) on firm performance: The business value of AI-based transformation projects. Business Process Management Journal*, 26(7), 1893–1924. <https://doi.org/10.1108/BPMJ-10-2019-0411>
92. Ward, S. (n.d.). *What is Email Marketing?* The Balance Small Business. <https://www.thebalancemoney.com/email-marketing-2948346>
93. Watson. (2020). *Predictive Analytics and Consumer Scoring - Automated Decision-Making with AI Requires Transparency*. <https://www.emarketer.com/content/predictive-analytics-consumer-scoring>

94. Wichert, A. (2020). *Principles of Quantum Artificial Intelligence: Quantum Problem Solving and Machine Learning*.
95. Wilson, L. (2019). *Integrating Digital and Traditional Marketing: Best Practices*. *Marketing Today*, 34(2), 78-92.
96. Wirth, N. (2018.), Hello marketing, what can artificial intelligence help you with? *International Journal of Market Research*, 60(5), 435-438.
97. Wu, X., & Chen, S. (2021). Enhancing digital marketing with chatbots: A review and research agenda. *Journal of Business Research*, 138, 470-478
98. Zaveri, B., & Amin, P. (2019). Augmented and virtual reality: Future of marketing trends. *MANTHAN: Journal of Commerce and Management*, 6(1), 16-25.
99. Zubcsek, P. P., Katona, Z., & Sarvary, M. (2011). *Network effects and personal influences: The diffusion of an online social network*. *Journal of Marketing Research*, 48(3), 425–443.



## **APPENDICES**



## **Appendix 1: Povzetek**

Namen magistrskega naloge je preučiti vlogo umetne inteligence, zlasti nedavno razvitega ChatGPT, v digitalnem marketingu. AI in ChatGPT sta v zadnjih letih spremenila pristop podjetij k trženju in zagotovila bolj prilagojene, osredotočene in učinkovite trženjske tehnike. Ker te tehnologije hitro napredujejo, postaja za organizacije vse bolj pomembno, da razumejo posledice marketinških taktik.

V okviru magistrskega naloge bodo za boljši vpogled empirično preučena naslednja raziskovalna vprašanja:

RQ1: Ali ChatGPT izboljša operativno učinkovitost v digitalnem trženju?

RQ2: Ali ima umetna inteligenca širši in relevantnejši spekter znanja in informacij?

RQ3: Ali integracija ChatGPT povzroči izgubo delovnih mest na področjih, kot so pisanje besedil, oglaševanje možganov in raziskave za demografsko ciljanje in ciljanje potencialnih kupcev?

RQ4: Ali je mogoče človeško perspektivo popolnoma zanemariti in nadomestiti z znanjem ChatGPT?

Magistrsko nalogo obravnava določeno temo na raziskovalen in opisen način. Metoda je deskriptivna in kvalitativna. Da bi izvedeli več o učinkih umetne inteligence v digitalnem trženju, združuje pregled literature z zbiranjem primarnih podatkov. Primarna raziskava bo uporabila kvalitativno metodologijo in se osredotočila na izkušnje z AI članov zaposleni v digitalno trženje. Intervjuje bo opravilo deset zaposlenih iz različnih oddelkov digitalnega marketinga. Med zbiranjem in analizo podatkov bo zagotovljena kakovost in zanesljivost podatkov. Na podlagi zastavljenih ciljev in raziskovalnih vprašanj so oblikovani naslednji splošni zaključki:

ChatGPT igra pomembno vlogo v digitalnem trženju z zagotavljanjem avtomatskih odgovorov in ustvarjanjem vsebine, vendar se sooča z omejitvami, kot so pomanjkanje resničnih izkušenj in možnost napačnih informacij. Človeški nadzor je ključen za ohranjanje zanesljivosti in etičnih načel, preprečevanje morebitnih nepravilnosti. Etičen pristop in zanesljivost sta bistvena, ChatGPT pa lahko prinese vrednost v personalizaciji, hitrosti in učinkovitosti digitalnega trženja.

## Appendices 2: Interview questions guide

Part 1 (related to RQ1: Does ChatGPT improve operational efficiency in digital marketing?)

- Can you introduce yourself (who you are, how old you are, what you do professionally)?
- In which company do you currently work (for how long), what position do you hold (since when), and what does your company do?
- Have you ever used AI-powered chatbots or conversational AI systems like ChatGPT in your work or daily life? If yes, how did you use them, and if not, what do you think about their potential benefits or challenges?
- How do you perceive the impact of ChatGPT on workload and time management?

For example:

For part 1 all of interviewed persons are working in digital marketing agencies.

Emedia Patch (Focusing on different digital marketing channels, specialized in digital advertising and conducting various types of campaigns across all platforms.)

- Have you ever used AI-powered chatbots or conversational AI systems like ChatGPT in your work or daily life? If yes, how did you use them, and if not, what do you think about their potential benefits or challenges? (*e.g., does ChatGPT provide any benefits in everyday tasks and in which way it can help?*)
- How do you perceive the impact of ChatGPT on workload and time management? (*e.g., is ChatGPT time efficient or time consuming?*)

Part 2 (related to RQ2: What are the primary differences and challenges faced by individuals when integrating AI into their everyday tasks compared to traditional research methods?)

- In what ways can ChatGPT support humans in making decisions and completing tasks without taking over their responsibilities completely? (*e.g., is there any need to look after the ChatGPT, can it work without human touch?*)
- Is ChatGPT faster and more thorough than humans in finding information for digital marketing? If yes, do you have a sense of how faster it is? If not, why? (*e.g. is ChatGPT 3.5 enough fast or do you need to upgrade to premium version and also could ChatCPT find information faster than human ?*)
- Are there any specific challenges or limitations you've encountered when relying on AI for everyday tasks? (*e.g. is there some types of tasks in which ChatGPT can't help?*)
- Do you think people are generally aware of the potential benefits of AI in everyday life, or is there a need for more education and awareness? (*e.g.do people know about the existence of ChatGPT and how to use it?*)

Part 3 (related to RQ3: How does ChatGPT's use in business impact job opportunities in copywriting, ad brainstorming, and demographic research for targeting potential buyers?)

-How can professionals in your field make the most of ChatGPT to improve their daily work without seeing it as a threat to their jobs? *(e.g.in what way can ChatGPT help but not to replace fully human?)*

- Do you think individuals and companies have ethical responsibilities when using AI technologies like ChatGPT in their daily business operations? *(e.g., are there any ethical issues that can be considered if yes what?)*

- Can you provide examples of how ChatGPT has been beneficial in your everyday business tasks or how it has impacted your industry? *(e.g. what type of task can ChatGPT help?)*

- Are there specific parts of copywriting, ad idea generation, and demographic research that ChatGPT can't easily automate? *(e.g. since digital agencies are using copywriting, targeting research, can ChatGPT help in that or not?)*

Part 4 (related to RQ4: What are the crucial factors associated with using ChatGPT in digital marketing?)

- Which factors should digital marketers prioritize when integrating ChatGPT into their activities, and what is the key factor that contributes to the successful integration of ChatGPT into digital marketing activities? *(e.g. will usage of ChatGPT bring benefits to the company or not?)*

- Can you use an example to explain how you achieved success in relation to these factors? *(e.g. providing example of task in which ChatGPT help you fully to finalize task?)*

- Do you believe that ChatGPT will continue to be a valuable tool for digital marketers in the future, and if so, why? *(e.g., what are trends and projections of ChatGPT, and is it going to be useful in future with some additional improvements?)*