Original Article

The Role of Artificial Intelligence in Digital Marketing: A Review

[1]Sepideh Bashang, [2]Puttanna K
[1]Ph.D. Research Scholar, Department of Business Administration, Mangalore University, Karnataka, India.
[2]Professor & Chairman, Department of Business Administration, Mangalore University, Karnataka, India.

Abstract: The purpose of the current study paper is to provide a review of earlier studies that have examined the crucial role of artificial intelligence (AI) in digital marketing. AI has become a potent instrument that has the potential to revolutionise several industries, including marketing. By enabling companies to analyse massive volumes of data, identify patterns, and take informed decisions, artificial intelligence has completely changed how businesses engage with their customers online. The current research paper followed a library research method in that 26 research papers related to the topic were reviewed. All the reviewed research papers were published from 2017-2023. The paper discussed how AI technologies transform various aspects of digital marketing, enabling businesses to enhance customer experiences, optimize advertising campaigns, and improve overall marketing effectiveness. The numerous uses of AI in digital marketing were also covered, including the development of personalised content, chatbots for customer support, predictive analytics for targeting and segmentation, and recommendation engines for product ideas. The research also emphasised the advantages and potential drawbacks of integrating AI into digital marketing efforts.

Keywords: Artificial Intelligence, Chatbots, Customer Segmentation, Digital Marketing.

I. INTRODUCTION

Digital marketing is just one of the many industries artificial intelligence (AI) has transformed. The electronic platform is used by digital marketing to advertise services and goods (Mkwizu, 2020; Yasmin et al., 2015). Digital marketing is a relatively new scientific discipline that has grown quickly and is frequently seen as the direction of marketing (Magano et al., 2020). With rapid technological advancements, businesses increasingly rely on AI to enhance their marketing strategies and gain a competitive edge in the digital landscape. According to Russell and Norvig (2016), artificial intelligence (AI) is a computerised system that collects data to carry out tasks for intelligent animals in order to maximise their chances of success (Russell, S.J and Norvig, P., 2016). Digital marketing offers customers a clearly satisfying experience with AI for social media and digital platforms like Facebook and Instagram. Before directing users to offers appropriate for their needs, these platforms carefully assess the information provided by users. In addition, according to E. Forrest, B. Hoanca, 2015, D. Dumitriu, and M.A.M. Popescu (2020), AI can assist marketers in identifying and forecasting trends.

The goal of this review study paper is to investigate the different applications, advantages, and limitations of artificial intelligence (AI) in digital marketing. By delving into the latest studies and industry practices, this paper seeks to provide a comprehensive understanding of how AI is reshaping the way businesses engage with their target audience, optimize campaigns, and drive growth in the digital era.

A) Research Objectives
➢ To explore the role of artificial intelligence in digital marketing by examining recent relevant studies.
➢ To study various applications of artificial intelligence in digital marketing.
➢ To understand the key benefits and the potential challenges associated with implementing artificial intelligence in digital marketing strategies.

B) Various Applications of Artificial Intelligence in Digital Marketing
a. Customer Segmentation:
Kotler and Keller (2016) claim that customer segmentation aids businesses in determining the most lucrative client segments, creating targeted marketing efforts, and more efficiently allocating resources. AI algorithms enable marketers to segment their target audience more effectively by analyzing demographic data, online behavior patterns, and social media interactions (Smith et al., 2019). By identifying specific customer segments based on their preferences and interests, marketers can tailor their messaging to resonate with each group individually.

b. Personalized Advertising:

Digital marketing is not an exception to how AI has revolutionised other industries. According to Estrada-Jiménez et al. (2016), personalised advertising consists of offers that are made specifically for each individual client and positioned next to the website's content so that they blend in with the website the customer is viewing. Using personalised advertising, businesses may reach customers with pertinent offers (Jung, 2017). On the one hand, advertisers continue to spend on ad customization because they perceive positive outcomes (Evergage, 2019).

AI-powered recommendation systems leverage machine learning algorithms to deliver personalized consumer advertisements (Li et al., 2020). These systems analyze user behavior data to understand individual preferences and serve relevant ads that are more likely to convert into sales. Personalized advertising not only enhances user experience but also increases conversion rates for businesses.

c. Content Creation:

Gagnon (2014) advises "show what you know" when creating content to advertise one's business and its goods or services. The development of content that educates the audience about what the organisation "knows" should be a part of any company's strategy. According to Gagnon (2014), "know" refers to "improving organisational knowledge," which should be useful, entertaining, and competitively relevant. It should enable the content to stay in the thoughts of the viewers so that they return to the business to fulfil their needs (Ibid). AI technologies such as natural language processing (NLP) have made significant advancements in generating high-quality content automatically (Gupta and Agrawal, 2019). Chatbots powered by NLP can engage with customers in real-time conversations while providing accurate information or resolving queries. Additionally, AI-driven content creation tools assist marketers in generating blog posts, social media updates, and email newsletters efficiently.

d. Chatbots

In digital marketing platforms, chatbots are AI-powered computer programmes that give clients advice on how to streamline human engagement and enable conversational queries in natural language (Chopra, 2020). In addition to being used for discussion, chatbots are also used by professionals in regulated fields like doctors and lawyers. In addition to other human rights concerns, taxonomy, civic responsibility, consumer protection, cyber security, privacy and data protection, and intellectual property rights (IPR) are all taken into account (Leaua and Didu, 2021).

e. Data Analysis:

Because AI algorithms can process and analyse massive amounts of data in real time, they allow marketers to get insightful knowledge about the behaviour and preferences of their customers (Bughin et al., 2018). By leveraging AI-powered data analysis, marketers can gain a competitive edge in understanding customer preferences and effectively targeting their marketing efforts.

C) *Key Benefits of Implementing Artificial Intelligence in Digital Marketing*

a. Improved Customer Relations

With AI, digital marketers will have access to a large amount of customer data that they can use to create customized experiences which are tailored to their customer's preferences. This will help them to develop stronger relationships with customers and make them more aware of their brand.

b. Increased Productivity

With AI, digital marketers can easily make a series of repetitive tasks automated. As a result, output will increase and there will be time and resources to spare..

c. Effective Marketing

In advertising, AI eliminates the presumption. digital marketers can improve their digital marketing plans through the use of AI-driven data analysis and services.

d. Increased Return on Investment (ROI)

By improving their decision-making and helping them to produce more content that works better, AI will make a difference in digital marketers' lives. In view of the benefits of improving audience knowledge, they can direct targeted digital marketing initiatives with a higher return on investment.

e. Improved User Experience

Digital marketers will be able to deliver the right content to the right audience using AI in their marketing. Therefore, customers are more comfortable when they know what to look for. According to the reports, brands with AI have higher chances of attracting consumers.

D) *Potential Challenges Associated with Implementing Artificial Intelligence in Digital Marketing*

a. Loss of Jobs

There has been plenty of panic and hysteria, particularly in online marketing, as AI technology has become smarter and more sophisticated. This is primarily due to the emergence of AI-based technologies, which could threaten workers with expertise in this field. The use of AI by society is generally needed to adapt more appropriately. In order to retain their staff more effectively, workers need to improve their skills constantly.

b. lack of high-quality data

It is crucial to improve the marketing approach through increased sales, given a world where information continues to be constantly updated with extensive amounts of data. Lack of high-quality data is one of the main issues facing AI. There are not sufficient data sets that AI can use for processing.

c. Lack of Transparency

Given the use of AI in marketing decision-making, it might be challenging to comprehend how decisions are formed. Identifying any irregularities or mistakes in a system and ensuring that this technology is used with due regard for ethical considerations can be difficult.

d. Lack of Privacy

The fear that with the advent of AI, we're going to lose our privacy is what most digital marketers are worried about; data breaches, including identity theft, have become more common in different frameworks. With regard to their security and privacy concerns, many customers are becoming increasingly aware of this.

e. Lack of Creativity

AI may be able to do many marketing tasks on its own, but it cannot reproduce the creativity and intuitions of humans as well. Consequently, advertising campaigns that do not have emotional impact or authenticity created by human beings may arise.

II. LITERATURE REVIEW

A) *The Role of Artificial Intelligence in Digital Marketing by Examining Recent Relevant Studies*

In 2023, Hadalgekar and Desai examined how AI functions in digital marketing. The goal of the study was to comprehend how AI developments may boost customer interaction and marketing tactics. In order to analyse the body of knowledge already available on AI in digital marketing, the authors did a thorough literature study. They identified various applications of AI, such as chatbots, recommendation systems, and predictive analytics. They also discussed the benefits and challenges associated with implementing AI in digital marketing, emphasizing the need for organizations to adapt to this technology-driven era.

Bharati Rathore (2023) in the research paper titled "Digital Transformation 4.0: Integration of AI & Metaverse in Marketing,"explored the integration of AI and the metaverse in marketing. The paper discussed the potential of AI and the metaverse to revolutionize marketing strategies and enhance customer experiences. The paper emphasized that this integration can lead to personalized marketing campaigns, improved customer engagement, and increased brand loyalty. The paper provided insights into how businesses can leverage AI and the metaverse to create immersive virtual experiences for customers, enabling them to interact meaningfully with products and services.

The use of AI in social media marketing was examined in the study "AI in Social Media Marketing" by Hafizah Omar Zaki (2022). The study demonstrated how numerous facets of social media marketing tactics can be improved by utilising AI technology, such as machine learning algorithms and natural language processing. The authors discussed how AI could assist in automating content creation, optimizing ad targeting, analyzing consumer behavior, and improving customer engagement on social media platforms. They emphasized the potential benefits of integrating AI into social media marketing campaigns, including increased efficiency, personalized user experiences, and improved return on investment.

Bawack et al. (2022) conducted a bibliometric study and literature review to explore the role of AI in the field of e-commerce. The authors analyzed a comprehensive set of scholarly articles from various databases and identified key themes and trends in AI adoption within e-commerce. The research found that AI has been widely used in e-commerce, including chatbots for customer support, personalised suggestions, fraud detection, supply chain management, and pricing optimisation. In the context of e-commerce, the survey also highlighted the growing interest in cutting-edge AI technologies like machine learning and natural language processing.

The function of AI in strengthening digital marketing tactics was examined in the research paper titled "A Study on the Application of AI in Digital Marketing" by Kavitha KN (2022). The goal of the study was to better understand how AI may be

used in the field of digital marketing to increase customer interaction, personalise marketing efforts, and streamline decision-making procedures. The author explored different AI methods that may be used to analyse massive amounts of data and produce insightful information for marketers, including machine learning, natural language processing, and predictive analytics. The paper concluded that integrating AI into digital marketing practices can improve customer experiences, increase efficiency, and improve business outcomes.

A study on the use of artificial intelligence and cutting-edge digital technology in the energy sector was done by Lyu and Liu in 2021. The authors explored the potential benefits and challenges associated with integrating AI into various aspects of the energy industry. They discussed how AI can enhance energy efficiency, optimize energy management systems, enable predictive maintenance, and facilitate renewable energy integration. The paper also highlighted the importance of data analytics, machine learning algorithms, and the Internet of Things (IoT) in harnessing the full potential of AI in the energy sector. In conclusion, Lyu and Liu (2021) emphasized that AI and emerging digital technologies have significant implications for transforming the energy industry. By leveraging these technologies, organizations can achieve improved operational efficiency, cost reduction, and environmental sustainability. They noted that obstacles like worries about data privacy, cybersecurity dangers, and ethical issues must be overcome for implementation to be successful. This study served as a starting point for more investigation into the potential uses of AI in the energy sector and offered insightful information about those applications.

An ethical framework for AI and digital technologies was put up by Ashok, Madan, Joha, and Sivarajah in the year 2021. The authors highlighted the growing importance of ethics in AI development due to its potential impact on society and individuals. They argued that ethical considerations should be integrated into designing and deploying AI systems to ensure responsible and fair use. The proposed framework consisted of four key dimensions: transparency, accountability, fairness, and privacy. Transparency emphasized the need for clear communication about how AI systems work and their limitations in building trust among users. Accountability involves holding developers and users responsible for the outcomes of AI systems and ensuring mechanisms for redress in case of harm or bias. Fairness focuses on avoiding discriminatory practices by addressing biases in data collection and algorithmic decision-making processes. Lastly, privacy emphasized protecting individuals' personal information while using AI technologies. By incorporating these dimensions into the development process, the authors argued that organizations could mitigate potential ethical concerns associated with AI and digital technologies while maximizing their benefits for society as a whole.

A thorough investigation into the condition of AI now and its potential for the future was done by Zhang and Lu in the year 2021. The writers examined a range of AI-related topics, including its background, uses, difficulties, and anticipated future developments. The study emphasised the development AI has made recently, especially in fields like machine learning, natural language processing, and computer vision. It has been able to find uses in a number of industries, including health care, finance, transportation, and entertainment. However, the authors also acknowledged several challenges that must be addressed for AI to reach its full potential. These challenges include ethical concerns, data privacy issues, algorithmic biases, and the need for transparent decision-making processes. Looking ahead, Zhang and Lu discussed the future prospects of AI. They emphasized the importance of continued research and development to overcome existing limitations and enable AI systems to achieve higher levels of autonomy and intelligence. The authors also highlighted the need for interdisciplinary collaborations to ensure responsible deployment of AI technologies.

An overview of AI's use in digital marketing was given in the study "AI on Digital Marketing - An Overview" by N. Thilagavathy and E. Praveen Kumar (2021). The writers covered how several facets of digital marketing, such as consumer segmentation, personalised advertising, content generation, and customer relationship management, are being improved by AI technologies including machine learning, natural language processing, and predictive analytics. The report emphasised the potential advantages of AI in enhancing marketing tactics and commercial decision-making in the digital era.

Mhlanga (2021) explored the impact of AI on digital financial inclusion within the finance industry, focusing on Industry 4.0. The paper highlighted how AI technologies have revolutionized financial services, enabling greater accessibility and inclusion for individuals previously excluded from traditional banking systems. The study emphasized that AI-powered solutions have facilitated digital financial inclusion by providing personalized financial services, enhancing risk assessment capabilities, and improving customer experience. Additionally, the research discussed the challenges and risks associated with AI implementation in finance, such as data privacy concerns and potential biases in decision-making algorithms. Overall, this work highlights the revolutionary potential of AI in fostering financial inclusion and makes a case for more investigation into its ethical ramifications.

In 2020, Ribeiro and Reis did a study on the use of AI in digital marketing. The study looked at how AI technology may improve a range of digital marketing practises, including customer segmentation, personalised advertising, and predictive

analytics. The authors emphasised that AI algorithms can examine vast amounts of data to find patterns and trends, allowing marketers to more effectively target particular customer categories. Additionally, chatbots and virtual assistants powered by AI can offer clients individualised advice and help, boosting their overall experience. The report also highlighted the use of AI in digital marketing predictive analytics. By analyzing historical data and consumer behavior patterns, AI algorithms can predict future trends and customer preferences. This facilitates data-driven decisions and the development of targeted marketing strategies. The authors concluded that integrating AI into digital marketing can revolutionize the industry by improving customer targeting, personalization, and overall campaign effectiveness.

A research report entitled "The Impact of AI on Digital Marketing of Financial Services to Vulnerable Consumers" has been published by Mogaji, Soetan and Kieu (2020). In order to target and assist vulnerable clients in the financial sector, the authors were trying to find out how AI technology can be used for digital marketing tactics. The study employed a qualitative research approach, using interviews with industry experts and analysis of relevant literature. The study's findings revealed that AI has significant potential to enhance digital marketing efforts for financial services targeting vulnerable customers. AI technologies like machine learning algorithms can help identify and segment vulnerable customer groups, enabling personalized marketing campaigns that address their specific needs.

Additionally, AI-powered chatbots can provide real-time assistance and support to vulnerable customers, improving their overall experience with financial services. This research paper provided valuable insights into the potential benefits of incorporating AI into digital marketing strategies for financial services targeting vulnerable customers. The findings highlighted the importance of leveraging AI technologies to enhance customer segmentation and personalized marketing efforts to better serve this specific customer segment.

The strategic use of AI in the digital age was thoroughly reviewed in this study article by Borges et al. (2020), and it also indicated potential future research topics. The authors comprehensively analyzed 105 articles from various academic databases and classified them based on their research focus and contribution. The findings suggested that AI is being strategically used in different areas, such as customer relationship management, supply chain management, and decision-making processes. The paper also highlighted the importance of considering ethical implications and human-AI collaboration in designing and implementing AI systems. In conclusion, our research revealed insightful perspectives on the strategic application of AI in the digital age and suggested areas for future investigation.

In their research study, Capatina et al. (2020) looked into how potential customers' expectations and the potential capabilities of AI-based social media marketing software matched up. In order to determine whether these features are in line with the predicted future capabilities of such software, the study set out to discover the key aspects that potential customers would most like to see in AI-based social media marketing software. The authors polled prospective users to learn what they expected from AI-based social media marketing software. The results revealed that potential users highly value features such as automated content creation and curation, real-time analytics and insights, personalized targeting and engagement strategies, and integration with other marketing tools. These findings were then compared with the anticipated capabilities of AI-based software for social media marketing in the future. The study offered insightful information about what prospective customers can anticipate from AI-based social media marketing tools. It highlighted areas where there may be a gap between user expectations and anticipated capabilities. This information can guide developers in designing AI-based software that meets user needs and preferences.

The study article "The Role of AI and Data Network Effects for Creating User Value" by Gregory et al. (2020) made the case that AI technologies have the ability to significantly benefit consumers by utilising data network effects. Personalization, contextualization, and augmentation are the three main ways that AI and data network effects contribute to the production of user value, according to a conceptual framework they provided. The authors emphasised that AI's capacity to analyse enormous volumes of user data and customise experiences to specific preferences enables personalisation. The ability of AI systems to comprehend and adapt to certain circumstances is known as contextualization, and it enables more pertinent and timely interactions with people. Lastly, augmentation involves AI's capacity to enhance human capabilities by providing insights, recommendations, or automating tasks. By examining various industries such as healthcare, transportation, and retail, the authors illustrated how AI-driven platforms could create user value by leveraging data network effects across these three mechanisms. They also discussed the implications for organizations regarding developing AI capabilities and managing data networks effectively. Overall, this research paper provided valuable insights into the role of AI and data network effects in creating user value across different industries. It highlighted the importance for organizations to harness these technologies strategically to deliver personalized experiences, adapt to specific contexts, and augment human capabilities.

Karnouskos (2020) explored the emergence and implications of deepfakes in the era of AI in digital media. Deepfakes are fabricated movies or photos that accurately portray people talking or doing things they have never done. The study

emphasised the dangers that could arise from deepfakes, such as their capacity to propagate false information, sway public opinion, and damage people's reputations. It also discussed the challenges in detecting and combating deepfakes, emphasizing the need for advanced AI techniques to develop effective countermeasures. The author concluded by calling for a multidisciplinary approach involving technology, policy, and education to address the ethical and societal concerns raised by deepfakes.

In the research paper "AI as the digital agency" by Pär J. Ågerfalk (2020), the author explored the role of AI as a digital agency. The paper argued that AI has the potential to act as a proactive and autonomous agent in various digital contexts, making decisions and taking actions on behalf of individuals or organizations. The author discussed how AI can be designed to possess agency-like qualities, such as intentionality, autonomy, and adaptability, enabling it to interact with humans and other systems meaningfully. The paper also highlighted the ethical implications of AI agencies and emphasized the need for responsible design and governance of AI systems.

Lacárcel (2020) explored the main applications of AI in digital marketing strategies within the tourism industry. The paper highlighted that AI has become essential for tourism businesses to enhance customer experiences, optimize marketing campaigns, and improve decision-making processes. Personalised suggestions, chatbots for customer support, sentiment analysis for social media monitoring, and predictive analytics for demand forecasting are just a few of the important applications of AI that the author cited in this context. Tourism businesses can get a competitive edge and more effectively cater to the changing requirements and tastes of their target audience by utilising AI technologies.

Kokina and Davenport (2020) explored the impact of AI on auditing practices. The paper discussed how automation and AI technologies are transforming the auditing profession, leading to increased efficiency and accuracy in financial analysis. The authors highlighted various AI applications in auditing, such as data extraction, anomaly detection, and predictive analytics. They argued that AI could enhance auditors' capabilities by enabling them to analyze larger datasets, identify patterns, and detect potential fraud more effectively. However, the authors also acknowledged potential challenges associated with AI adoption in auditing, including ethical considerations and the need for auditors to develop new skills to utilize these technologies effectively.

Davenport, Guha, Grewal, and Bressgott (2019) explored the transformative potential of AI in the field of marketing. The authors argued that AI technologies have the capacity to revolutionize various aspects of marketing, including customer experience, data analysis, and decision-making processes. Marketers may personalise customer experiences and provide more focused marketing efforts by utilising AI algorithms and machine learning techniques to extract insightful information from massive volumes of data. Additionally, chatbots and virtual assistants driven by AI can improve customer service by offering on-demand help and support. However, the authors also highlighted potential challenges associated with AI adoption in marketing, such as ethical concerns and the need for human oversight to ensure the responsible use of these technologies.

In order to better understand how AI is affecting businesses and customer behaviour, Abrardi, Cambini, and Rondi (2019) carried out a poll. The writers emphasised how AI has the ability to fundamentally alter a number of corporate processes, including product creation, customer support, and marketing. They talked about how AI can help businesses analyse massive volumes of data and generate precise predictions, which would lead to better decision-making procedures. Additionally, the authors examined the implications of AI on consumer behavior, emphasizing that personalized recommendations and targeted advertising enabled by AI can significantly influence consumers' purchasing decisions. The study concluded that AI adoption by firms has the potential to reshape markets and consumer behavior in significant ways.

The research paper titled "Special Section Introduction: AI and Advertising" by Hairong Li (2019) explored the intersection of AI and advertising. The author highlighted the increasing role of AI in shaping advertising practices and discussed its potential impact on various aspects of the advertising industry. The paper provided an overview of the articles included in the special section, which delve into topics such as AI-driven personalized advertising, consumer behavior analysis using AI, and ethical considerations surrounding AI in advertising.

The role of AI in personalized engagement marketing is examined in the research paper presented by Kumar, V., Rajan, B., and Lecinski, J. (2019). The authors argued that AI has the potential to revolutionize marketing by enabling personalized interactions with customers at scale. They discussed how AI could be used to collect and analyze large amounts of customer data to gain insights into individual preferences and behaviors. By leveraging this information, marketers can create tailored marketing messages and offers that resonate with customers personally. The paper also highlighted various AI techniques that can be employed in personalized engagement marketing, such as machine learning algorithms and natural language processing. These techniques enable marketers to automate tasks like content creation and campaign optimization, resulting in more efficient and effective marketing efforts. Overall, the authors emphasized that AI is not meant to replace human marketers but

enhance their capabilities. By harnessing the power of AI, marketers can deliver highly relevant and engaging experiences to customers, leading to increased customer satisfaction and loyalty.

The research paper by Brill, T. M., Munoz, L., and Miller, R. J. (2019) examined customer satisfaction with AI applications such as Siri and Alexa. The study investigated the factors that influence users' satisfaction with these digital assistants and explored the impact of AI on customer experience. The researchers surveyed 300 participants to collect data on their usage patterns, expectations, and perceptions of AI applications. The findings revealed that users' satisfaction with digital assistants is influenced by various factors, including perceived usefulness, ease of use, reliability, and personalization capabilities. Additionally, the study highlighted the importance of trust in AI systems for enhancing customer satisfaction. The research provided valuable insights into understanding customers' attitudes towards AI applications and offered implications for businesses to improve their AI technologies and enhance user experiences.

The potential of AI in advertising and how marketers might use it throughout the consumer journey were both examined by Kietzmann, Paschen, and Treen (2018). The authors argued that AI has the ability to transform advertising by providing personalized and targeted experiences to consumers. They discussed various AI applications, such as chatbots, recommendation systems, and virtual assistants, that can enhance customer engagement and improve advertising effectiveness. The paper highlighted the importance of effectively understanding consumer behavior and preferences to leverage AI in advertising. By analyzing vast amounts of data, AI algorithms can identify patterns and trends that enable marketers to deliver relevant content to consumers at different stages of their journey. The authors emphasized the need for marketers to adopt a customer-centric approach and focus on building trust with consumers through transparent data practices. In conclusion, this research paper provided insights into how AI can revolutionize advertising by enabling personalized consumer experiences. It emphasized the importance of understanding consumer behavior and building trust through transparent data practices. Marketers can leverage AI applications such as chatbots and recommendation systems to enhance customer engagement along the consumer journey.

In the research paper titled "AI: the next digital frontier?", Bughin et al. (2017) explored the potential impact of AI on various industries and economies. The authors argued that AI has the potential to revolutionize productivity and economic growth, but its adoption and implementation require careful consideration of several factors. The paper highlighted that AI technologies have already started transforming the healthcare, manufacturing, and finance industries. However, the authors noted that widespread adoption of AI is still limited due to challenges related to data availability, talent acquisition, and regulatory concerns. They emphasized the need for organizations to develop a comprehensive AI strategy that aligns with their business objectives and capabilities. Bughin et al. (2017) concluded by suggesting that governments should play a crucial role in fostering AI development through investments in research and development, education, and infrastructure. They also emphasized the importance of collaboration between governments, businesses, and academia to address ethical concerns associated with AI implementation.

III. CONCLUSION

The world of digital marketing is changing as a result of AI. By looking at recent, pertinent studies (2017–2023), this review research study examined the crucial significance of AI in digital marketing. In this paper, various applications of AI in digital marketing were discussed, including chatbots, automated content creation for digital marketing, personalised advertising, customer segmentation, which is essential for targeted marketing campaigns, and personalised advertising, which is the main challenge for digital marketers to balance personalised advertising experiences and respecting the privacy of users. The main advantages and potential drawbacks of incorporating AI into digital marketing tactics were also discussed in this study.. As AI develops, digital marketers must keep up with the most recent developments and successfully utilize AI technology to promote business success. In addition, significant financial investments are needed to apply AI in digital marketing. Small businesses with limited resources and insufficient funding may find it difficult to implement AI. The absence of rapid adaptation in AI may result in lost opportunities or ineffective strategies and highlight the need for continuous learning and professional development at a digital marketing level. AI has been able to manage several tasks in digital marketing autonomously. However, it is still necessary to recognize the importance of human creativity and intuitions for creating efficient marketing campaigns. In conclusion, while the immense potential of AI for increasing digital marketing efforts is yet to be seen, the reliance on AI may lead to an erosion of human contact and authenticity, which can have negative effects on customer involvement and brand loyalty.

IV. RECOMMENDATIONS

Future research on how AI can enhance personalized marketing through studying the effectiveness of AI algorithms in analyzing data of customers, predicting their behavior and delivering tailored marketing messages is recommended. AI has revolutionized content creation for digital marketing; therefore, assessing the role of AI with advancements in natural language processing (NLP) in generating high-quality content to improve target customer engagement is recommended. As chatbots are

increasingly being used in customer service, further research can examine the integration of AI with chatbots to enhance customer experiences and satisfaction. Furthermore, future research should investigate AI algorithms' role in social media marketing platforms data to identify trends, sentiment analysis, influence identification and optimizing ad targeting strategies. Last but not least, future studies should concentrate on analysing the moral ramifications and potential biases, such as privacy difficulties and transparency problems, connected to the use of AI in decision-making processes. In conclusion, this research paper provided insights into how AI can revolutionize advertising by enabling personalized consumer experiences. It emphasized the importance of understanding consumer behavior and building trust through transparent data practices. Marketers can leverage AI applications such as chatbots and recommendation systems to enhance customer engagement along the consumer journey.

Interest Conflicts

There is no apparent conflict of interest (COI).

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