MARKETING, MANAGERIAL STRATEGIES AND ORGANISATIONAL CULTURE

THE IMPACT OF ARTIFICIAL INTELLIGENCE ON DIGITAL MARKETING AND SOCIAL MEDIA

Miloš MASTILOVIĆ
Tijana ĐUKIĆ
Pavle BRZAKOVIĆ

Abstract: *This research paper aims to examine the significant impact of artificial intelligence (AI) on digital marketing and social media, which have revolutionized the way businesses communicate with their customers, ushering in a new era of enhanced capabilities. AI-driven systems improve customer satisfaction and experience by leveraging user preferences, behaviors, and search history to deliver personalized content. Marketing campaign automation has simplified operations, allowing marketers to ensure their campaigns are timely and relevant by proactively adapting specific strategies, enabled by real-time audience segmentation and predictive analytics. This form of development not only improves operational efficiency but also provides the resources needed to develop more effective and efficient strategies in an increasingly competitive digital environment. Further research, innovation, and improvements in user engagement are expected as AI continues to evolve and integrate into marketing practices.*
Keywords: *artificial intelligence, digital marketing, social media, digital platforms.*

INTRODUCTION

The implementation of artificial intelligence (AI) in digital marketing and social media platforms has profoundly altered these domains, improving functionality and user engagement. A pivotal advancement is the personalization of content. Artificial intelligence systems analyze user preferences, behaviors, and search histories to deliver personalized content, including advertisements, posts, and videos, that are consistent with consumers' interests. Platforms such as Facebook and Instagram employ artificial intelligence to customize user feeds, thereby improving user satisfaction and engagement (Esch & Black, 2021). A notable element is the automation of marketing campaigns. AI enhances operational efficiency by automating tasks such as budgeting, audience selection, and performance optimization, allowing marketers to concentrate on strategic planning (Anjorin, K.,2024). AI-driven solutions

enhance A/B testing by comparing different ad versions, thereby reducing human error and increasing marketing effectiveness (Mirwan, 2023, Ljepava, 2022). AI significantly influences the domain of predictive analytics. Through the analysis of extensive datasets, AI identifies trends and forecasts user behavior, enabling marketers to proactively modify their strategies, which is essential for sustaining a competitive advantage (Jarek & Mazurek, 2019). Artificial intelligence has transformed audience targeting. Real-time segmentation of demographic, psychographic, and behavioral data enables platforms to target users with greater precision. Facebook's „Lookalike Audiences" utilize existing data to attract new users with comparable characteristics, thus expanding the potential consumer base (Logalakshmi, 2023). Platforms such as Google Ads employ artificial intelligence to improve keyword selection and budget allocation based on real-time performance metrics, thereby optimizing return on investment (Noranee & Othman, 2023). This responsiveness is essential in the current rapid digital environment. AI-driven content recommendation systems are essential for improving user engagement. Platforms such as TikTok, YouTube, and Amazon employ algorithms to suggest content and products, enhancing user experience and increasing engagement rates. AI tools like ChatGPT and Canva AI enhance content production efficiency, enabling marketers to generate advertisements, images, and copy more effectively, thereby fostering experimentation and innovation in marketing strategies (Murár, 2023). The significance of AI in multi-channel marketing is paramount. It streamlines campaign management across various platforms, guaranteeing unified marketing strategies with consistent messaging (Brecht, P., et al, 2021). Cost minimization is a significant advantage of AI, as process automation diminishes dependence on manual labor while improving campaign effectiveness. Ultimately, natural language processing (NLP) enables brands to analyze user comments, reviews, and feedback, facilitating prompt responses to consumer inquiries and enhancing customer support (Velev, 2023). The incorporation of AI into digital marketing and social media has significantly advanced personalization, automation, and efficiency, allowing marketers to devise more effective strategies in a competitive digital landscape (Elkhatibi, Y., 2024).

DIGITAL MARKETING PLATFORM TRANSFORMATION AND SOCIAL MEDIA

The implementation of artificial intelligence (AI) into digital marketing platforms has fundamentally altered how organizations interact with

consumers, refine their marketing tactics, and improve operational efficiency (Ponomarenko, 2024). This transformation is defined by several significant breakthroughs, including better personalization, automation, predictive analytics, and improved consumer involvement.

Enhanced Personalization Artificial Intelligence has empowered marketers to provide highly tailored information to users by scrutinizing extensive data concerning user preferences, habits, and interactions. This feature facilitates the development of customized marketing messages that resonate with particular consumers, ultimately enhancing engagement and conversion rates (Zaman, 2022). AI-driven recommendation algorithms on platforms such as Amazon and Netflix evaluate user behavior to propose products or content that correspond with their preferences, thereby substantially improving the user experience (Sharma, 2023; Ma, 2023).

Automation Of Marketing Campaigns - The automation of marketing processes constitutes a crucial element of digital marketing transformation. AI technologies optimize numerous tasks, including audience segmentation, campaign management, and performance monitoring (Peyravi, B., et al., 2020). Automating tedious operations enables marketers to concentrate on strategic decision-making and the creative elements of their campaigns. AI-powered tools, such as chatbots and automated email marketing systems, enable organizations to interact with customers in real-time, delivering prompt responses to requests and improving customer satisfaction (Kassem, 2020).

Predictive Analytics - AI-enabled predictive analytics is essential for revolutionizing marketing strategy. Through the analysis of previous data, AI systems can predict future consumer behavior and market trends, allowing marketers to make informed, data-driven decisions (Esch, P. and Black, J., 2021). This skill enables firms to predict client demands and preferences, resulting in more efficient targeting and resource allocation. AI can discern patterns in consumer purchase behavior, enabling organizations to refine their inventory and marketing tactics accordingly (Khaldy, 2023).

Improved Audience Targeting - AI improves audience targeting by allowing marketers to segment their consumers using demographic, psychographic, and behavioral data (Ziakis, 2023). This accuracy facilitates more efficient marketing initiatives that target the appropriate audience at the optimal moment. Platforms such as Facebook employ artificial intelligence to generate „Lookalike Audiences," assisting advertisers in identifying prospective clients with analogous traits to their current clientele, thus broadening their outreach and enhancing campaign efficacy (Dixit, 2022).

Enhanced Customer Engagement - AI technology has revolutionized customer engagement tactics by offering tools that enable significant interactions between brands and consumers. AI-driven personalized marketing messages, dynamic content, and interactive experiences enhance customer engagement. Furthermore, AI-powered analytics enable organizations to assess customer sentiment and feedback instantaneously, allowing for the adaptation of plans to align with changing consumer expectations (Hemalatha, 2023).

Obstacles and Ethical Implications - Although AI offers significant advantages in digital marketing, its integration also poses obstacles. Concerns around data privacy, algorithmic bias, and ethical considerations must be resolved to uphold consumer trust and guarantee appropriate marketing tactics (Frost, E. and Carter, S., 2020). Organizations must establish comprehensive data governance frameworks and ethical principles to address these difficulties effectively (Leary, 2023; Sáez-Ortuño, 2023).

Table 1. Differences between digital platforms before and with AI

Platform	Functioning before AI	Functioning with AI
Google Ads	- Manual keyword management. - Basic audience segmentation.	- Automated bid management. - Dynamic ad creation based on user behavior.
Facebook Ads	- Manual audience targeting. - Static ads.	- Lookalike audiences generated by AI. - Dynamic ads tailored to user interactions.
LinkedIn Ads	- Basic targeting based on profession and industry.	- AI analyzes job positions, skills, and interests for more precise targeting.
YouTube Ads	- Ads displayed regardless of user interest.	- AI algorithms recommend ads based on search and viewing history.
Microsoft Ads	- Basic keyword strategies and static campaigns.	- Predictive analytics and automated campaign optimization.
Amazon Advertising	- Static ads based on products and searches.	- Personalized ads leveraging user purchase histories and AI recommendations.
Pinterest Ads	- Manual pin creation and targeting without deeper audience insights.	- AI analyzes user interests and behavior for better recommendations and targeting.
Salesforce Cloud	- Basic automated campaigns without personalization.	- Einstein AI personalizes campaigns and suggests resources based on user data.

Source: Authors research

The table illustrates the evolution of prominent digital marketing platforms before and after the implementation of artificial intelligence (AI). Before AI, platforms depended on manual management and rudimentary targeting techniques; however, AI now facilitates automation, personalization, and enhanced user targeting, markedly augmenting campaign efficacy.

Artificial intelligence (AI) has transformed social media platforms such as Facebook, Instagram, TikTok, Twitter (now X), LinkedIn, YouTube, Snapchat, and Pinterest by analyzing user interactions, enhancing content relevancy, and presenting information customized to user preferences (Millagala, 2023). This has enhanced user engagement and satisfaction, enabling platforms to provide more tailored experiences. TikTok's „For You Page" curates material according to user interactions, whereas Twitter emphasizes tweets based on user preferences (Kang, H. and Lou, C., 2022). LinkedIn's recommendation system uses artificial intelligence to suggest pertinent postings, job opportunities, and professional relationships (Bruyn, A., et al., 2020). Snapchat has adopted AI technologies to develop customized AR filters and targeted adverts (Kim, D., et al, 2022). Nonetheless, ethical problems persist, encompassing user privacy, data security, and algorithmic prejudice.

Table 2. Differences between social media before and with AI

Social Media Platform	Functioning Before AI	Functioning With AI
Facebook	- Static posts with basic audience targeting.	- AI analyzes user interactions (likes, shares, and comments) to optimize the relevance of content and ads.
Instagram (Kim, D.2022)	- Content was displayed in chronological order, limiting discovery based on interests.	- AI-based algorithms display content tailored to user preferences, improving engagement and time spent.
TikTok	- Content appeared randomly with no personalized recommendations, reducing user engagement.	- AI drives the „For You Page," recommending content based on user interactions, preferences, and viewing habits.
Twitter/X	- Tweets were shown in chronological order, often making relevant content hard to find.	- AI prioritizes and highlights tweets most relevant to user interests, improving discoverability and engagement.
LinkedIn	- Static posts were shown with limited targeting based on industry or job titles.	- AI enhances targeting by recommending relevant posts, job listings, and professional connections based on user activity.

YouTube	- Video recommendations were based on overall popularity, not personalized preferences.	- AI analyzes watch history and user preferences to recommend highly relevant videos, enhancing the viewing experience.
Snapchat	- Static filters and ads lacked personalization, offering generic experiences.	- AI uses AR technology to create personalized filters and ads tailored to user interests and behaviors.
Pinterest	- Recommendations were based on general categories, with limited user-specific insights.	- AI analyzes visual data and user search behavior to recommend highly relevant pins and personalized content.

Source: Authors research

The table illustrates the transformation of social media platforms through AI by enhancing user engagement, personalization, and relevance. Historically, platforms utilized static methods for content and advertisement display; however, contemporary advanced algorithms evaluate user behavior and preferences, thereby improving content and advertisement dissemination.

REVOLUTIONIZING MARKETING STRATEGIES: THE IMPACT OF ARTIFICIAL INTELLIGENCE ON DIGITAL AND SOCIAL MEDIA PLATFORMS

Various dimensions, such as automation, personalization, targeted accuracy, efficiency, and user engagement, can analyze the transition of artificial intelligence (AI) into digital marketing and social media platforms (Tauheed, 2024).

Automation - in digital marketing, AI enhances campaign management by automating bid modifications and creating dynamic, behavior-based advertisements. Platforms such as Google Ads employ AI to autonomously modify bids according to performance criteria, ensuring the efficient allocation of marketing budgets. Likewise, Amazon Advertising utilizes AI to generate advertisements that adjust to user activity, thereby improving the relevancy of ads presented to prospective buyers.

Artificial intelligence automates content recommendations on social media sites according to user preferences. TikTok's „For You Page" exhibits this by employing algorithms to personalize material for individual users, hence enhancing engagement. Moreover, platforms such as Twitter (now X) enhance the prominence of pertinent postings via artificial intelligence,

guaranteeing that users see content that corresponds with their preferences and engagements.

Customization - digital marketing systems utilize AI to generate highly tailored adverts based on insights obtained from user activity, search history, and preferences. This degree of customization guarantees that advertisements are pertinent and captivating, resulting in increased conversion rates. Facebook customizes targeted advertisements for individual users based on their online behaviors and engagements.

Conversely, social media sites employ AI to improve user experiences with tailored content suggestions. Instagram's Explore Feed and YouTube's suggested videos exemplify how AI evaluates user interactions to curate tailored content that enhances user engagement (Ahmadi, A., 2021). Moreover, Snapchat utilizes AI to implement tailored filters, enabling users to engage with material in a manner that aligns with their unique interests.

Precision in targeting AI - substantially improves audience targeting on digital marketing platforms through pattern analysis and the generation of lookalike audiences. Facebook Ads may identify users with traits akin to existing consumers, enabling businesses to efficiently target new potential clientele. Predictive analytics enhances marketers' ability to anticipate customer preferences, facilitating more accurate targeting techniques.

Social media networks employ AI to select pertinent messages and adverts according to user interactions, preferences, and search history. LinkedIn's employment recommendations and Pinterest's tailored pins exemplify how AI-driven targeting may augment user engagement by providing material that corresponds with personal preferences.

Efficacy - AI significantly enhances the efficiency of marketing initiatives by optimizing them in real time. Platforms such as Salesforce's Einstein AI and Microsoft Ads employ adaptive algorithms to minimize manual labor and improve campaign efficacy. This real-time optimization enables marketers to swiftly adapt to fluctuating market conditions and user behaviors, resulting in improved outcomes. Algorithms on social media dynamically adjust information presentation to enhance interaction. By concentrating on user preferences and reducing extraneous content, platforms can sustain user engagement and promote interaction, which is essential in the contemporary rapid digital landscape. AI-generated data and predictive instruments guarantee that digital marketing platforms deliver dynamic and engaging adverts that optimize user engagement. Through the analysis of user data, AI can discern the most efficacious techniques for consumer involvement, resulting in elevated engagement rates (Micu, A., et al., 2021).

Social media platforms augment user engagement by suggesting captivating and interest-based content. TikTok's feed and YouTube's autoplay suggestions continuously present content that aligns with user preferences, thereby fostering a more interactive and enjoyable user experience.

CONCLUSION

The implementation of artificial intelligence (AI) into digital marketing and social media platforms has fundamentally transformed advertising and user interaction strategies, evolving from traditional, static methods to advanced, data-driven techniques. The evolution of advertising platforms, including Google Ads, Facebook, LinkedIn, and YouTube, illustrates the efficacy of AI in improving targeting precision, personalizing user interactions, and maximizing campaign performance. The capabilities of AI, such as predictive analytics, real-time segmentation, and dynamic content development, have resulted in enhanced audience engagement and improved conversion rates. Likewise, social media platforms such as Facebook, Instagram, TikTok, Twitter (now X), and LinkedIn have undergone substantial evolution due to the impact of AI. AI implementation has enabled these platforms to offer more personalized and engaging content, thereby boosting user satisfaction and lengthening their user engagement. AI-driven algorithms have advanced beyond just content distribution, providing personalized recommendations that align with particular user tastes and habits. This breakthrough has boosted user experience and improved the effectiveness of advertising and promotional campaigns. Nonetheless, the swift progression of AI in digital marketing and social media introduces issues that require resolution. Concerns such as user privacy, data security, and algorithmic bias are essential factors in guaranteeing responsible AI deployment. The ethical ramifications of AI, particularly with the assessment and forecasting of user behavior, pose significant inquiries about user autonomy and the risk of manipulation. Organizations must equilibrate AI-driven innovation with ethical considerations to sustain confidence and foster equitable participation on these platforms. AI has transformed digital marketing and social media through improved personalization, optimized campaign efficacy, and increased engagement. The enhanced efficiency and pertinence of marketing initiatives demonstrate the advantages; however, these improvements must align with a commitment to ethical principles and user privacy. By tackling these issues, AI can persist in transforming the digital landscape while cultivating a reliable and inclusive environment for users.

REFERENCES

Ahmadi, A. and Ieamsom, S. (2021). Influencer fit post vs celebrity fit post: which one engages instagram users more? Spanish Journal of Marketing - Esic, 26(1), 98-116. https://doi.org/10.1108/sjme-12-2020-0217

Anjorin, K. (2024). Harnessing artificial intelligence to develop strategic marketing goals. International Journal of Management & Entrepreneurship Research, 6(5), 1625-1650. https://doi.org/10.51594/ijmer.v6i5.1127

Brecht, P., Niever, M., Kerres, R., Ströbele, A., & Hahn, C. (2021). Smart platform experiment cycle (spec): a process to design, analyze, and validate digital platforms. Artificial Intelligence for Engineering Design Analysis and Manufacturing, 35(2), 209-225. https://doi.org/10.1017/s0890060421000081

Bruyn, A., Viswanathan, V., Beh, Y., Brock, J., & Wangenheim, F. (2020). Artificial intelligence and marketing: pitfalls and opportunities. Journal of Interactive Marketing, 51(1), 91-105. https://doi.org/10.1016/j.intmar.2020.04.007

Dixit, S. (2022). Artifical intelligence and crm., 92-114. https://doi.org/10.4018/978-1-7998-7959-6.ch006

Elkhatibi, Y. (2024). Digital marketing and artificial intelligence: towards a better understanding of the two strategies. IJAMRS, 4(3), 755-760. https://doi.org/10.62225/2583049x.2024.4.3.2847

Esch, P. and Black, J. (2021). Artificial intelligence (ai): revolutionizing digital marketing. Australasian Marketing Journal (Amj), 29(3), 199-203. https://doi.org/10.1177/18393349211037684

Frost, E. and Carter, S. (2020). Reporting of screening and diagnostic ai rarely acknowledges ethical, legal, and social implications: a mass media frame analysis. BMC Medical Informatics and Decision Making, 20(1). https://doi.org/10.1186/s12911-020-01353-1

Hemalatha, A. (2023). Ai-driven marketing: leveraging artificial intelligence for enhanced customer engagement.. https://doi.org/10.47715/jpc.b.978-93-91303-61-7

Jarek, K. and Mazurek, G. (2019). Marketing and artificial intelligence. Central European Business Review, 8(2), 46-55. https://doi.org/10.18267/j.cebr.213

Kang, H. and Lou, C. (2022). Ai agency vs. human agency: understanding human–ai interactions on tiktok and their implications for user engagement. Journal of Computer-Mediated Communication, 27(5). https://doi.org/10.1093/jcmc/zmac014

Kassem, R. (2020). Digital transformation in pharmacy marketing: integrating ai and machine learning for optimized drug promotion and distribution. World Journal of Advanced Research and Reviews, 15(2), 749-762. https://doi.org/10.30574/wjarr.2022.15.2.0792

Khaldy, M. (2023). The impact of predictive analytics and ai on digital marketing strategy and roi., 367-379. https://doi.org/10.1007/978-3-031-42455-7_31

Kim, D., Lee, S., Sung, Y., & Um, N. (2022). Free tumbler in snapchat vs coffee tasting ticket in instagram: the impact of gift type and message type on b2c gift-giving on different social media platforms. European Journal of Marketing, 56(8), 2369-2390. https://doi.org/10.1108/ejm-03-2020-0175

Leary, P. (2023). Leveraging decision-making ai within marketing operations transformation. AIRWA, 2(2), 115. https://doi.org/10.69554/bpoo8354

Ljepava, N. (2022). Ai-enabled marketing solutions in marketing decision making: ai application in different stages of marketing process. Tem Journal, 1308-1315. https://doi.org/10.18421/tem113-40

Logalakshmi, S. (2023). Carving a brighter path with synergy of digital marketing & ai. International Journal of Trendy Research in Engineering and Technology, 07(05), 18-24. https://doi.org/10.54473/ijtret.2023.7505

Ma, N. (2023). Analysis of the impact of artificial intelligence on digital marketing. Highlights in Business Economics and Management, 19, 625-631. https://doi.org/10.54097/hbem.v19i.12097

Micu, A., Căpăţînă, A., Micu, A., Geru, M., & Lixăndroiu, R. (2021). Social media marketing experts' perceptions regarding the capabilities of a future artificial

intelligence software. International Journal of Machine Learning and Computing, 11(3), 230-235. https://doi.org/10.18178/ijmlc.2021.11.3.1040
Millagala, K. (2023). Navigating the confluence of artificial intelligence and social media marketing. International Journal of Research Publications, 133(1). https://doi.org/10.47119/ijrp1001331920235473
Mirwan, S. (2023). Using artificial intelligence (ai) in developing marketing strategies. IJARSS, 1(3), 225-238. https://doi.org/10.59890/ijarss.v1i3.896
Murár, P. (2023). Using ai to create content designed for marketing communications. European Conference on Innovation and Entrepreneurship, 18(1), 660-668. https://doi.org/10.34190/ecie.18.1.1638
Noranee, S. and Othman, A. (2023). Understanding consumer sentiments: exploring the role of artificial intelligence in marketing. Jmm17 Jurnal Ilmu Ekonomi Dan Manajemen, 10(1), 15-23. https://doi.org/10.30996/jmm17.v10i1.8690
Peyravi, B., Nekrošienė, J., & Lobanova, L. (2020). Revolutionised technologies for marketing: theoretical review with focus on artificial intelligence. Verslas Teorija Ir Praktika, 21(2), 827-834. https://doi.org/10.3846/btp.2020.12313
PONOMARENKO, I. (2024). Artificial intelligence in digital marketing. SF, 155(3), 58-70. https://doi.org/10.31617/1.2024(155)04
Sáez-Ortuño, L. (2023). Impact of artificial intelligence on marketing research., 18-42. https://doi.org/10.4018/978-1-6684-9591-9.ch002
Sharma, K. (2023). Unlocking sales potential: how ai revolutionizes marketing strategies. Journal of Knowledge Learning and Science Technology Issn 2959-6386 (Online), 2(2), 231-250. https://doi.org/10.60087/jklst.vol2.n2.p250
Tauheed, J. (2024). Exploring the role of artificial intelligence in digital marketing strategies. Journal of Business Communication & Technology, 54-65. https://doi.org/10.56632/bct.2024.3105
Velev, D. (2023). Issues of artificial intelligence application in digital marketing.. https://doi.org/10.3233/faia230716
Zaman, K. (2022). Transformation of marketing decisions through artificial intelligence and digital marketing. Journal of Marketing Strategies, 4(2), 353-364. https://doi.org/10.52633/jms.v4i2.210
Ziakis, C. (2023). Artificial intelligence in digital marketing: insights from a comprehensive review. Information, 14(12), 664. https://doi.org/10.3390/info14120664

Notes on the authors

Miloš MASTILOVIĆ, Msc, is an Assistant at the Faculty of Applied Management, Economics and Finance, University Business Academy in Novi Sad, Belgrade Jevrejska Street no. 24, 11000 Belgrade, Phone: +381 64 2406418, E-mail: milos.mastilovic@ mef.edu.rs Research field: marketing, digital marketing, communication, market segmentation, information technology.

Tijana ĐUKIĆ, Ph.D., is an Assistant Professor at the Faculty of Applied Management, Economics and Finance, University Business Academy in Novi Sad, Belgrade Jevrejska Street no. 24, 11000 Belgrade, Phone: +381 64 2406418, E-mail: tijana.djukic@ mef.edu.rs Research field: economy, management, quality management, education, human resource.

Pavle BRZAKOVIĆ Ph.D., is a Full Professor at the Faculty of Applied Management, Economics and Finance, University Business Academy in Novi Sad. E-mail. pavle.brzakovic@ mef.edu.rs Research field: management, communication, strategic management, leadership, knowledge management.