

## THE FUTURE OF GENERATIVE AI IN DIGITAL MARKETING: CHALLENGES AND OPPORTUNITIES

Marija Đaković<sup>1</sup>, Aleksandar Rikalović<sup>2</sup> [0000-0003-2777-5706]

### Abstract

*This paper examines the impact of generative artificial intelligence (AI) in digital marketing, focusing on both opportunities and challenges. Generative AI, which creates new content such as text, images, and videos, enables improved personalization and automation in marketing. Tools like ChatGPT and DALL-E streamline content production and provide real-time, tailored interactions. However, challenges such as data privacy, ethical concerns, and lack of transparency in AI decision-making arise with the use of these technologies. This paper analyzes key AI tools in various marketing areas, evaluates their effectiveness, and discusses the ethical and legal implications of their use. While AI offers significant opportunities for innovation, responsible use and human oversight are essential for long-term success in digital marketing.*

**Key words:** generative artificial intelligence, digital marketing, ethical and legal aspect, challenges, opportunities

## 1. Introduction

Artificial Intelligence (AI) plays a crucial role in digital marketing today, enabling marketers to utilize data for predictive analysis and optimize user experience (Johnsen, 2024). Digital marketing employs a wide range of strategies to connect with target audiences through digital channels, including SEO, social media, PPC advertising, and email marketing. The integration of AI into these processes allows for content personalization and campaign automation, significantly improving efficiency.

Artificial intelligence refers to technologies that enable machines to simulate human intelligence. In the context of digital marketing, AI encompasses a wide array of tools and techniques, such as data analysis, natural language processing (NLP), and machine learning. These technologies allow businesses to analyze vast amounts

<sup>1</sup> University of Novi Sad, Faculty of Technical Sciences, Serbia, marija.djakovic.im13@gmail.com

<sup>2</sup> University of Novi Sad, Faculty of Technical Sciences, Serbia, aleksandar.rikalovic@ivi.ac.rs

of data, predict consumer behavior, optimize customer experience, and automate marketing processes. By leveraging AI, marketers can create more personalized and efficient campaigns that drive better engagement and higher conversion rates. (King, 2019.)

Generative AI creates new content, such as text, images, or videos, based on the data it has been trained on. Unlike traditional AI, which analyzes data, generative AI produces original content, making it highly useful in creative fields. A key example is Generative Adversarial Networks (GANs), where one network generates content, and another evaluates its realism, improving the quality of the generated output over time.

## 2. AI Tools in Digital Marketing

The impact of AI tools across various disciplines is significant. These technologies enhance efficiency and creativity in many field of digital marketing. After researching over 40 AI tools (<https://digitalmarketinginstitute.com/blog/what-are-the-best-ai-and-marketing-automation-tools>), a table highlighting their applications has been completed.

*Table 1: AI tools in different fields of digital marketing*

Field of digital marketing	AI tools
Video editing	InVideo, AI marketing automator, BeHuman, Vidiq, Create Studio, Descript, Opus Clip, Veed.io, Submagic, Get Munch, Syntesia, Supertone,
Graphic design	Canva, BrendMark, AdCreative,
Web design	Durable, Hub spot, Relume AI site builder, Dorik
SEO optimization	Semrush, SurferSeo, Frase, ClearScope
Copywriting	Copy.ai, Quillbot, ContentAtScale, ChatGPT, Journalist, Deepl, Jasper, Grammarly
Social media management	Notion, Inflact, FeedHive, Zapier
Image editing	Recraft, DALL-E, Midjourney

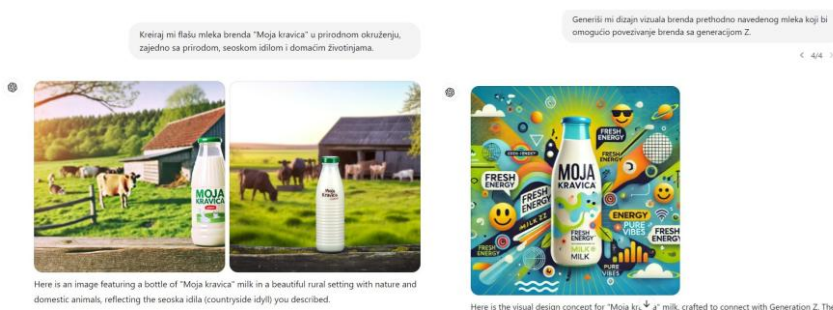
Based on frequency of use and specificity compared to other tools, one representative has been selected from each field, which is then described further

Artificial Intelligence (AI) has become an indispensable part of modern marketing strategies, offering opportunities to enhance the efficiency and personalization of campaigns (Upadhyay, M. & Chitnis, P. (2022). *Modern Marketing Using AI*. BPB Publications. pp. 21–30). Below, key AI tools that significantly contribute to various aspects of digital marketing are analyzed.

ChatGPT stands out as a content generation tool, offering automatic creation of high-quality text for various marketing channels, including blogs, social media, and email campaigns. One of its primary benefits is efficiency, as it significantly reduces the need for human writers and speeds up content production. ChatGPT's

real-time personalized communication enhances user engagement, making it ideal for creating tailored email campaigns that improve open and conversion rates. The tool is also available 24/7, ensuring continuous user support without requiring human agents. Additionally, ChatGPT's ability to analyze large volumes of data allows for deeper insights into consumer behavior, helping optimize marketing strategies. However, the downside is that it may lack emotional intelligence, leading to challenges when addressing complex customer issues. The pricing for ChatGPT includes a free version, while the Plus version costs \$20 per month (<https://chatgpt.com/>).

DALL-E revolutionizes visual content creation by generating images from textual descriptions. This tool allows marketing teams to create unique images, eliminating the need for stock photos and enabling brands to establish a distinct visual identity. DALL-E's ability to quickly produce images helps brands respond swiftly to market trends, significantly reducing the costs associated with traditional visual production methods, such as hiring photographers or models. Another major advantage is DALL-E's capability to generate a wide variety of image styles, providing creative flexibility for marketing campaigns. However, quality control can be an issue, as images might not always match the desired prompt perfectly, sometimes requiring multiple attempts. The cost of generating 115 images is around \$15, with access available through the ChatGPT Plus subscription (<https://openai.com/index/dall-e-3/>).

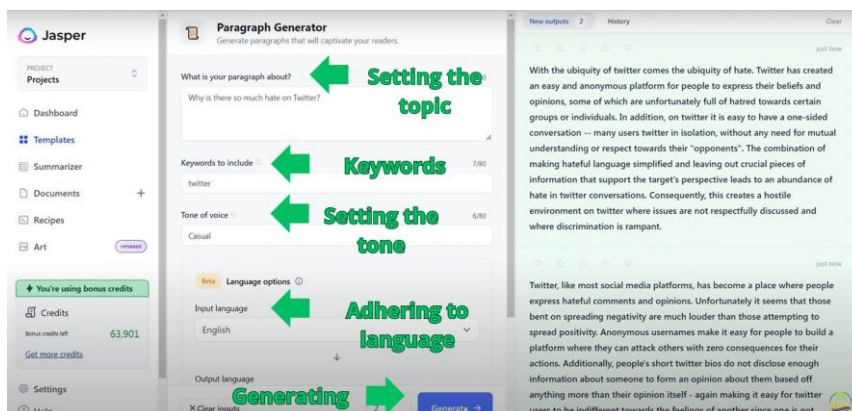


*Picture 1 - Generative AI tool DALL-E creating unique images from text descriptions, transforming visual content in digital marketing*

Canva Magic Studio extends the capabilities of the popular design platform Canva, making advanced design tools accessible to non-professional designers. The tool's Magic Edit feature allows users to easily modify images by removing unwanted objects, changing colors, and adding elements, making it an excellent choice for marketing teams looking to quickly adapt visuals. Additionally, it offers text-to-image, text-to-video, and text-to-graphics functionalities, providing a comprehensive suite for creating multimedia content. However, some limitations arise when compared to specialized tools like Adobe Creative Suite, as Canva Magic Studio may lack the fine-grained control needed for highly detailed projects. The

cost is \$12.99 per month for the Canva Pro subscription, or \$119.99 annually, with team plans available for larger organizations (<https://www.canva.com/magic/>).

Jasper is another powerful AI-driven content generator, optimized for marketing. Jasper stands out for its ability to generate SEO-optimized content while maintaining the brand's specific tone and style, thus helping improve search engine rankings and brand recognition. The tool also integrates with other platforms, including SurferSEO, HubSpot, and WordPress, making it an efficient choice for teams working on multiple platforms. Jasper's browser extension further enhances productivity by providing on-the-go support for content creation. While it offers a variety of templates to speed up content creation, there can be concerns about the authenticity of the generated content, as it might lack the emotional depth necessary to deeply connect with an audience. Jasper's pricing starts at \$39 per month for the Creator plan, with the Pro plan costing \$59 per month (<http://www.jasper.ai>).



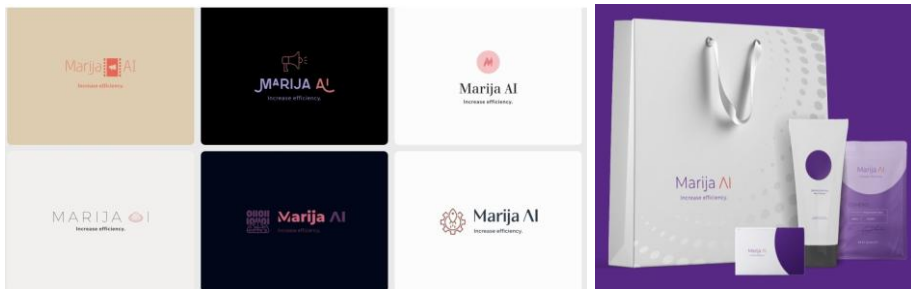
Picture 2- Jasper AI: Enables the generation of SEO-optimized content with options to select topic, keywords, tone, and language, tailoring content to the specific needs of the brand.

Semrush is a comprehensive tool for digital marketing, known for its keyword research, SEO analysis, and competitor tracking capabilities. With Semrush, marketers can explore relevant keywords, assess search volume, and adjust their SEO strategies accordingly. The tool also supports content creation through insights on trending topics and optimization tips, helping brands stay relevant in search engine rankings. One of its key strengths is its ability to track social media performance, allowing marketers to schedule posts and monitor competitor activity. However, the tool's complexity and high cost may pose challenges for smaller businesses. Semrush's basic subscription costs \$119.95 per month, making it one of the more expensive options available (<https://www.semrush.com>).

Durable is designed for the automatic generation of simple websites based on minimal user input, making it a valuable tool for small businesses and startups. With Durable, companies can quickly create functional websites without needing technical expertise, significantly speeding up the process of establishing an online presence. However, the simplicity of design may limit customization options for

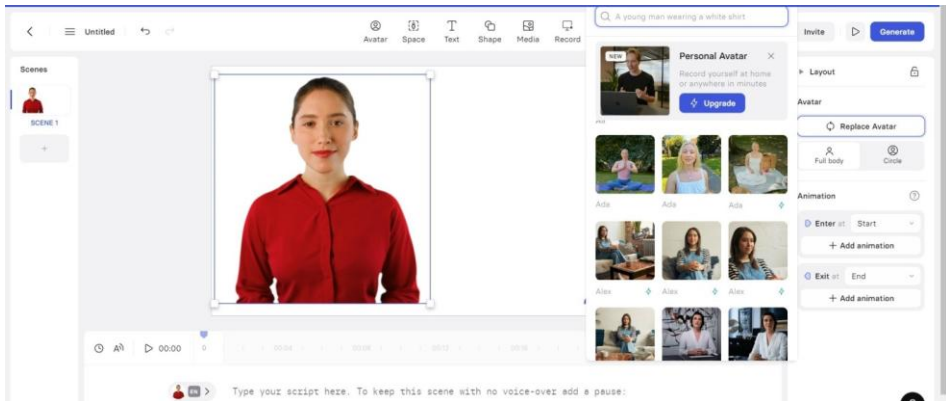
businesses that require a unique and highly personalized visual identity. Pricing for Durable varies based on the scope of use, but its scalability makes it accessible to smaller companies (<https://app.durable.co/website-builder>).

Brandmark.io offers an AI-powered solution for brand identity creation, including logos and other key branding elements. This tool is especially useful for businesses looking for a fast and cost-effective way to design a professional visual identity without investing in expensive designers. However, its limitations in personalization can be a drawback for companies with more specific branding needs. Brandmark.io is priced according to usage, with flexible plans for small to large businesses (<https://brandmark.io/>).



*Picture 3 - Brandmark.io: An AI-powered tool for creating brand identities, including logos and other key branding elements, providing a fast and cost-effective solution for businesses to establish a professional visual identity.*

Synthesia is a cutting-edge tool designed for creating video content with personalized avatars that can speak multiple languages. This tool simplifies video production for brands by eliminating the need for professional studios, cameras, or actors. Synthesia has become increasingly popular in digital marketing due to its ability to generate high-quality video content efficiently and provide customized messages for audiences. One of its standout features is the ability to create videos where virtual avatars read from a text script provided by the user. These avatars can be personalized to align with a brand's identity, allowing for more authentic communication with the audience. Synthesia also supports over 120 languages, making it ideal for multinational companies seeking to reach global markets. Users can customize not only the language but also the avatar's tone, style, and gender, ensuring that messages are both understandable and engaging for diverse audiences. The tool integrates seamlessly with platforms like PowerPoint, allowing for easy inclusion of videos in marketing presentations. However, there are limitations in terms of avatar naturalness, as some users find that the avatars still lack the expressiveness of real humans. The pricing starts at \$18 per month for individual users, with more advanced plans available for larger teams and enterprises, offering more avatars, additional customization options, and higher video limits (<https://www.synthesia.io/>).



Picture 4 - Synthesia: AI tool for creating personalized video avatars that can speak multiple languages, simplifying video production for brands and allowing for authentic, customizable communication with global audiences.

All of these tools provide different advantages and opportunities for optimizing marketing campaigns, and their usage depends on the specific needs and resources a company can invest. By combining these tools, digital marketing becomes more efficient, personalized, and adaptable to the dynamic needs of the market.

### 3. Ethical and Legal Aspects of AI in Digital Marketing

The ethical and legal implications of using AI in digital marketing are critical areas of concern as the technology continues to evolve. One of the primary ethical challenges is the collection and use of consumer data. AI systems rely on vast amounts of personal information to make predictions and target marketing campaigns, raising concerns about privacy violations and data misuse. This issue is compounded by the fact that many consumers are unaware of how their data is being collected and used. (Ltifi, 2025).

From a legal perspective, various regulations have been introduced to protect consumer data, such as the General Data Protection Regulation (GDPR) in the European Union. These laws set strict guidelines for data collection, processing, and storage, ensuring that companies using AI must comply with stringent privacy standards. Non-compliance can result in significant fines and reputational damage (Krinjari, 2017).

Moreover, the transparency of AI decision-making processes is another ethical concern. AI algorithms often operate as "black boxes," making it difficult to understand how decisions are made. This lack of transparency can lead to biased outcomes in areas like targeted advertising, where certain groups may be unfairly excluded or misrepresented.



Companies must navigate these ethical and legal challenges by implementing clear data governance policies, ensuring transparency in AI operations, and adhering to regulatory standards. Maintaining consumer trust through responsible AI use will be key to the sustainable development of AI in digital marketing.

#### **4. Challenges and Opportunities of AI in Digital Marketing**

The advent of AI in digital marketing offers numerous opportunities for personalization, automation, and strategic decision-making. AI enables marketers to analyze data from multiple channels to target consumers effectively, automating repetitive tasks and providing real-time insights that optimize advertising spend and boost return on investment. AI-powered tools, such as chatbots and personalized email marketing, have proven effective in enhancing customer experience, as they streamline customer interactions and deliver timely, relevant content (Hou, 2024) and data-driven personalization (Kogan Page, pp. 25–35). These tools contribute to improved customer satisfaction by addressing consumer needs with a higher degree of personalization.

However, several challenges persist with the integration of AI into marketing. A significant concern is data privacy. AI's reliance on large datasets raises ethical questions regarding the collection, storage, and use of consumer data. According to Hou (2024), consumers have increasing expectations for brands to respect their privacy while still providing personalized experiences. The shift to a cookie-less world, where third-party data collection is limited, places greater emphasis on first-party data—data collected directly by brands. This transition compels marketers to develop strategies for collecting data in a manner that is both ethical and transparent.

Another pressing challenge is the potential for bias in AI algorithms, which can lead to unintended discrimination, particularly in targeted advertising. AI models trained on biased data may perpetuate these biases, potentially excluding or misrepresenting certain demographic groups. Hou (2024) notes that as personalization technology advances, brands must take proactive measures to mitigate bias by regularly auditing AI systems and ensuring diverse datasets to reflect a wide range of consumer perspectives.

Transparency, or the lack thereof, is also a significant challenge. Many AI algorithms function as "black boxes," making it difficult for brands to explain how certain decisions are made. This opacity can erode customer trust, particularly when consumers do not understand why specific content or advertisements are shown to them. Hou (2024) emphasizes that transparency in AI decision-making processes is essential to maintaining consumer trust. Brands that openly communicate how AI influences customer interactions are better positioned to build lasting relationships with their customers.

Despite these challenges, AI continues to offer substantial opportunities in digital marketing. Tools such as AI-driven customer segmentation and predictive analytics enable brands to scale personalization efforts efficiently, which can lead to

higher engagement rates and improved customer loyalty. Additionally, as technology evolves, the cost of AI solutions decreases, making them accessible to smaller organizations and allowing a broader range of companies to leverage these tools for innovative marketing strategies (Hou, 2024). Data-driven personalization. Kogan Page, pp. 25–35).

In conclusion, while AI presents complexities in terms of data privacy, bias, and transparency, its potential to revolutionize digital marketing remains vast. Marketers who successfully navigate these challenges and prioritize ethical practices will be well-positioned to capitalize on the opportunities AI offers, particularly in creating scalable, personalized experiences that resonate with consumers.

## 5. Discussion and Conclusion

The future of AI in digital marketing offers immense possibilities for innovation, efficiency, and personalized customer experiences. As AI technologies evolve, businesses are increasingly able to deliver hyper-personalized marketing content, analyze vast datasets in real-time, and automate complex campaign management processes. These capabilities, driven by tools such as ChatGPT and DALL-E, enable more dynamic consumer interactions, allowing companies to optimize their marketing strategies based on immediate feedback and changing market trends.

One of the most significant opportunities presented by AI is the automation of repetitive tasks, freeing marketers to focus on higher-level strategic initiatives. Tools like AI-powered chatbots have already demonstrated the power of AI in enhancing customer engagement through real-time, personalized communication. This leads to better customer satisfaction and loyalty, as companies are able to provide more timely and relevant content tailored to individual preferences. Additionally, AI tools allow businesses to optimize advertising budgets and improve ROI by targeting the right audiences more effectively.

However, despite these advantages, there are challenges that cannot be overlooked. Data privacy remains a critical concern, as AI systems rely heavily on large datasets to function effectively. Marketers must ensure compliance with regulations such as the GDPR to protect consumer data and maintain trust. Furthermore, the lack of transparency in AI decision-making, often referred to as the "black box" problem, can lead to unintended consequences such as biased outcomes in targeted advertising. Brands that fail to address these issues risk damaging their reputation and losing customer trust.

The ethical implications of AI are equally important. While AI tools can significantly enhance efficiency, marketers must remain cautious of over-reliance on AI-driven insights. AI lacks the emotional intelligence and creativity that human marketers bring to the table. Therefore, the human element in marketing will continue to play a crucial role, particularly when it comes to understanding complex consumer needs and crafting emotionally resonant campaigns.



In conclusion, while AI will undoubtedly shape the future of digital marketing, businesses that successfully combine AI technologies with human creativity and ethical responsibility will be the most likely to thrive. Companies that navigate the challenges of data privacy, transparency, and bias while leveraging the full potential of AI-driven tools will lead the way in the next generation of marketing strategies. As AI continues to mature, its role in enhancing the customer experience will grow, but human oversight and creativity will remain essential in ensuring the sustainable and responsible use of these powerful technologies.

## REFERENCES

- [1] Hou, Z. (2024). Data-driven personalization. *Kogan Page*. EAN: 9781398614604
- [2] Johnsen, M. (2024). AI in digital marketing. *Berlin, Boston: Mercury Learning and Information*. <https://doi.org/10.1515/9781501519123>
- [3] King, K. (2019). Using Artificial Intelligence in Marketing. *Kogan Page*. EAN: 9780749483395
- [4] Christiansen, B. & Škrinjarčić, T. (Eds.). (2021). Handbook of Research on Applied AI for International Business and Marketing Applications. *IGI Global*. <https://doi.org/10.4018/978-1-7998-5077-9>
- [5] Ltifi, M. (Ed.). (2024). Advances in Digital Marketing in the Era of Artificial Intelligence: Case Studies and Data Analysis for Business Problem Solving (1st ed.). *CRC Press*. <https://doi.org/10.1201/9781003450443>.
- [6] Upadhyay, M., & Chitnis, P. (2021). Modern marketing using AI: Leverage AI-enabled marketing automation and insights to drive customer journeys and maximize your brand equity. *BPB Publications*.



© 2024 Authors. Published by the University of Novi Sad, Faculty of Technical Sciences, Department of Industrial Engineering and Management. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>).