

The Use of Artificial Intelligence (AI) in Marketing: Limitations and Challenges

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Abstract

The main objective of this paper is to examine the use of artificial intelligence (AI) in marketing, exploring the challenges and its limitations, data-related issues, ethical concerns and future implications, concluding with recommendations for responsible implementation.

In this paper, the author analyzes the main areas of use of artificial intelligence in marketing as well as its main limitations and the challenges that arise from it. Using AI in marketing has transformed how business interact with customers, make decisions, and optimize campaigns. Marketing today is using artificial intelligence for customer insights and data analysis, large-scale personalization, AI-driven chatbots handle customer inquiries and support in real time, campaign optimization, generate and manage content, sale forecasting and lead scoring, marketing automation. After describing the advantages, we want to explore limitations that marketers should be aware. Particularly we will explore challenges in this area. Finally, to make artificial intelligence a truly effective tool in marketing, we have provided basic recommendations for businesses. Despite the limitations and challenges, when used properly, AI can significantly improve efficiency, personalization, and customer satisfaction in marketing.

Keywords: Marketing, artificial intelligence, advantages, limitations, challenges, recommendations.

JEL Classification: M30, M31

1. Introduction

The 21st century is labelled the age of digital technologies and artificial intelligence (AI). Compared to other technologies, artificial intelligence is much more powerful. Because artificial intelligence is not a single technology, platform or tool, but a meta-technology that has enormous transformational power over other technologies. Artificial intelligence I is the creator of tools and platforms, so it has the power to generate many systems (Suleyman & Bhaskar, 2024). The main factors that have contributed to the development of artificial intelligence are vast amount of data (Big Data), graphics processing units (GPU) hardware, and artificial intelligence (ML) algorithm.

Many businesses have been implementing some form of artificial intelligence technologies such as robots and autonomous vehicles, facial recognition, natural language processing, and virtual agents of all sorts as part of their business transformation strategy. The applications of artificial intelligence are forecasted to increase continuously at an astounding clip in the near future when artificial intelligence enables businesses with possibilities of designing intelligent products, devising novel service offerings, and inventing new business models (Le, Chung, Quach & Thaichon, 2023).

Artificial intelligence has generated interest in various fields, including marketing. AI has become a transformative force in marketing, changing the way businesses understand, communicate, and serve consumers. AI’s ability to process large amounts of data, predict consumer behaviour, and personalize marketing strategies has significantly increased the operational efficiency and precision of marketing. However, while AI offers enormous potential for innovation, it also introduces a number of ethical, technical, and societal challenges that require attention.

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Therefore, this paper explores the theoretical underpinnings and practical implications of using AI in marketing, highlighting key challenges such as data dependency, ethical issues, algorithmic bias, and transparency, and the main limitations in its application. Data-related issues and legal frameworks such as the General Data Protection Regulation (GDPR, 2017) are further discussed, highlighting the risks associated with privacy breaches and misuse of personal data. Based on a critical analysis of the existing literature, the paper offers recommendations for the responsible implementation and management of artificial intelligence. It concludes that the sustainable future of AI-driven marketing depends not only on technological innovation but also on ethical responsibility and human oversight.

In terms of methodology, the paper synthesises information from academic articles, industry reports, case studies and legal documents through a thematic literature review. The paper explores how artificial intelligence is transforming marketing practices, enhancing product development, services, market intelligence, customer insights, and customer relationship management. It discusses various applications of artificial intelligence. Also, highlights the ethical concerns and challenges associated with artificial intelligence, such as data privacy, cybersecurity, biases, transparency, and the risks of manipulation. It emphasizes the importance of developing strategies to address potential issues arising from artificial intelligence adoption, including explainable artificial intelligence, controllable artificial intelligence, and solutions to privacy concerns. It discusses the future of artificial intelligence in marketing.

2. Using Artificial Intelligence (AI) in Marketing

The integration of artificial intelligence (AI) into marketing has transformed the way companies interact with consumers, analyze data, and optimize campaigns. Artificial intelligence has revolutionized marketing practices and has become a key driver of innovation in modern marketing. Its ability to process vast amounts of data, identify patterns, and automate decision-making has transformed how companies interact with consumers.

Artificial intelligence technologies such as machine learning, natural language processing, and predictive analytics have become essential tools in modern marketing. They enable marketers to analyze vast amounts of consumer data and develop personalized campaigns based on insights that would otherwise be inaccessible (Smith, 2023).

Artificial intelligence has found diverse applications in marketing, enabling businesses to enhance customer experiences, optimize operations, and drive strategic decision-making. Key areas of the use of artificial intelligence in marketing include customer insight, segmentation, predictive analytics, personalized marketing, chatbots, campaign optimization, content generation (Chaffey, 2022), sales forecasting, lead scoring and marketing automation.

Customer Insight, Segmentation and Predictive Analytics

Artificial intelligence processes large volumes of customer data to identify patterns, preferences, and behaviors. It anticipates customer actions like purchases or churn. Analyzes social media, reviews, and surveys to understand customer sentiment. Groups audiences based on behavior or demographics. Artificial intelligence algorithms allow marketers to segment customers more accurately based on behavioral patterns, purchase history, and demographic data (Patel, 2021).

For instance, Amazon uses machine learning models to predict customer preferences and recommend products accordingly, resulting in increased engagement and sales. (Smith & Jones, 2020). Similarly, Netflix leverages AI-driven predictive analytics to personalize content recommendations, enhancing user satisfaction and retention (Green, 2019).

Personalized Marketing

Artificial intelligence facilitates hyper-personalized marketing campaigns that adapt to individual consumer behavior in real time. It enables hyper-personalized experiences across touchpoints. Thus, in the case of email marketing, it creates dynamic content and sends time optimized for individual users. In the case of creating product recommendations, algorithms suggest items based on previous behavior (e.g. Amazon, Netflix). AI, also enables the creation of dynamic website content, by adapting the content of the homepage based on profile or activity of the visitor.

Coca-Cola, for example, employs artificial intelligence tools to analyze social media trends and consumer feedback, tailoring campaigns to target specific demographics effectively (Brown & White, 2021). AI-driven personalization increases conversion rates by delivering relevant content and offers at the optimal time.

Chatbots and Customer Service

AI-powered chatbots handle customer inquiries and support in real time. They enable 24/7 service, instant responses to frequently asked questions and order updates. Moreover, AI chatbots and virtual assistants are now standard in digital customer service, providing instant, data-driven responses that improve user satisfaction and reduce labor costs. Bots also collect and filter leads before passing them to sales. Operates across websites, apps, social media, and messaging platforms and provide omnichannel support. AI-driven chatbot deployed by HubSpot, provide real-time assistance to customers, reducing response times and operational costs (Davis & Wilson, 2020). These chatbots leverage natural language processing to understand customer queries, provide accurate responses, and escalate complex issues to human agents when necessary.

Campaign Optimization

Artificial intelligence improves ROI by optimizing ad spend and performance in real-time. AI powers programmatic advertising, automating ad buying and placement for better targeting. Artificial intelligence also does A/B testing, tests different content variations and selects the best-performing ones. AI also performs performance prediction. Predicts how different strategies will perform based on historical data. For example, Adzooma/Albert.ai, an AI-powered advertising optimization platform is designed to simplify, automate, and enhance digital advertising efforts to achieve better performance, higher ROI and reduced ad management workload ([Adzooma - AI for Smarter Advertising Optimization](#)). Automatically adjusts bids, targeting, and creative based on performance. Pattern89 ([Patter 89 — A SharpSpring Resource](#)) even predicts which creatives will perform best in digital advertising. It uses artificial intelligence to test and optimize ads before they go live.

Content Generation and Marketing Automation

Artificial intelligence technologies are also used to automate content creation, including email marketing, social media posts, and product descriptions. Tools like OpenAI's GPT models enable marketers to generate high-quality, contextually relevant content efficiently, freeing human resources for strategic tasks (OpenAI. 2023). Marketing automation platforms integrate artificial intelligence to optimize campaign timing, channel selection, and audience targeting.

Sales Forecasting and Lead Scoring

Artificial intelligence in marketing can also be used to sales forecasting. Namely, AI can be used to assess which potential customers i.e. leads have the highest chance of converting into actual customers. For this, Lead scoring models are used. They allow you to analyze user behavior, in order to determine priorities for whom to direct sales efforts. Sales forecasting is important because it predicts future sales to help with budgeting and inventory planning. Google

Analytics 4 (GA4) uses AI to predict customer behavior and automate insights. Predicts churn probability and revenue, and top-performing .

Artificial intelligence has enabled companies to rapidly adopt new business practices, improve product and service development, and help empower AI-based market intelligence and customer insights, as well as improve customer relationship management (Thaichon & Quach, 2023). These applications demonstrate that artificial intelligence is not merely a technological trend but a strategic asset that enhances marketing effectiveness and operational efficiency. However, despite these benefits, the adoption of artificial intelligence in marketing faces significant limitations and challenges, which will be explored in the following section.

3. Challenges and Limitations of Using Artificial Intelligence in Marketing

Artificial Intelligence (AI) has revolutionized digital marketing practices greatly by automating, optimizing, and predicting performance reporting (Jaligama, 2025). Despite the numerous benefits of artificial intelligence in marketing, its adoption is accompanied by significant limitations and challenges. See Table 1. Understanding these obstacles is crucial for companies seeking to implement artificial intelligence effectively.

Table 1: Challenges and Limitations of Using Artificial Intelligence in Marketing

Challenges in Applying AI in Marketing	Limitations of AI in Marketing
Data Quality and Inconsistencies	Limited Creativity
Lack of Explainability	Lack of Emotional Intelligence
Data Privacy and Ethical Concerns	Dependence on Historical Data
Lack of Human Oversight	Bias and Discrimination
High Implementation Costs	Real-Time Adaptability
Customer Trust and Transparency	Black Box Nature

Source: Author's research

One significant challenge lies in its dependency on large and high-quality data to learn patterns and make accurate predictions. If the data used for training are incomplete, biased, or outdated, the resulting artificial intelligence models may generate inaccurate insights, leading to suboptimal marketing decisions (Nguyen & Simkin, 2022). For example, a recommendation system trained on limited demographic data might repeatedly suggest products to only one segment of consumers, neglecting others.

Another challenge is lack of explainability. Many AI algorithms, especially deep learning models, operate as “black boxes,” making it difficult for marketers to interpret how certain decisions are made. This lack of explainability makes it hard for marketers to justify why certain decisions, like ad placements or content targeting, are made. When an artificial intelligence system automatically prioritizes some ads over others, marketers may struggle to explain why this ranking occurred.

The use of artificial intelligence in marketing raises ethical and privacy issues. Collecting and analyzing consumer data (behavioral, transactional, location data) can violate privacy norms if not properly regulated. Facebook’s Cambridge Analytica scandal exemplifies the risks associated with improper data usage (Cadwalladr & Graham-Harrison, 2018). Issues such as data privacy, discrimination, job displacement, absence of social interaction, cybersecurity risks, biases in decision-making, and the manipulation of information are critical challenges that need to be addressed (Kumar & Suthar, 2024). New applications of AI, such as DeepFakes, which use deep learning technology, could increase the risks of manipulation and deception. Companies must comply with data protection regulations such as the EU’s General Data

Protection Regulation (**GDPR**) and ensure transparency about how data are collected, stored, and used. Marketers must navigate GDPR in Europe, the California Consumer Privacy Act (CCPA), and other data protection regulations to avoid legal repercussions and maintain consumer trust (Voigt & Von dem Bussche, 2017). But compliance with regulations such as GDPR, CCPA, etc. is often complex.

Another challenge is **human factors and organizational readiness**. Successful artificial intelligence integration requires skilled personnel capable of managing artificial intelligence tools, interpreting results, and aligning artificial intelligence outputs with strategic objectives (Davenport & Ronanki, 2018). Many organizations struggle with insufficient expertise, resistance to change, or lack of leadership support, which hampers effective artificial intelligence adoption (Bughin, Seong, Manyika, Chui & Joshi, 2018).

Overreliance on artificial intelligence can reduce human creativity and intuition in marketing strategies. Companies may become overly dependent on artificial intelligence -generated insights, potentially missing nuanced consumer behaviors or cultural factors that artificial intelligence cannot fully interpret. Content or decisions generated by AI may be out of sync with the tone or ethos of the brand.

Developing, integrating, and maintaining artificial intelligence solutions often involves significant financial investments, including software licensing, hardware infrastructure, and employee training. Employing data scientists, purchasing software licenses, and maintaining cloud systems can be prohibitively for small and medium-sized enterprises (SMEs), limiting artificial intelligence adoption to larger corporations with more resources. These limitations underscore that while artificial intelligence provides powerful tools for marketers, it is not a panacea. Companies must address technical, ethical, organizational, and financial challenges to leverage artificial intelligence successfully.

A serious problem with using artificial intelligence in marketing is precisely the issue of transparency and consumer trust. Many AI models are complex and operate as “black boxes,” meaning that the logic behind their decisions can be difficult to understand. This lack of transparency can create trust issues, especially if the AI’s recommendations contradict what people would choose in marketing. Customers and internal teams may be wary of relying on AI to make decisions without understanding how it works. Some consumers may be distrustful of AI-based marketing, especially if they feel they are being “manipulated” by algorithms. Consumer skepticism can create a barrier to adoption and engagement.

One of the fundamental limitations of artificial intelligence is its limited creativity. Creativity limitations mean that artificial intelligence can generate content, but it is often formulaic. While tools like ChatGPT can write articles, product descriptions, and even social media posts, they can miss out on the nuanced human creativity that makes content resonate on an emotional level. Marketing often depends on emotional appeal and storytelling, which machines cannot authentically replicate. Machine intelligence lacks the emotional intelligence and creativity found in humans in marketing. It has difficulty generating truly novel ideas or understanding cultural subtleties. Artificial intelligence struggles with humor, culture-specific references, and creative storytelling.

Artificial intelligence lacks the emotional nuance and intuition that human marketers bring to campaigns. Understanding customer emotions, tone, or context is something that artificial intelligence finds difficult to accurately imitate. It may deliver a perfect technical message, but it may miss the “heart” of the communication. While artificial intelligence can improve efficiency and precision, excessive automation risks reducing creativity and emotional intelligence in marketing. Machines can analyze data but lack human empathy, intuition, and

cultural awareness. An AI-generated campaign may achieve good engagement metrics but fail to build emotional connections with the audience.

Another limitation of artificial intelligence is dependence on historical data. Artificial intelligence models depend on historical data for predictions, which may not reflect current trends which limits their ability to adapt to sudden market disruptions or shifts in consumer behavior. This makes them less effective in dynamic or emerging markets This can lead to bias and discrimination. Algorithms can inherit biases from their training data (e.g., gender or racial bias). They can unintentionally exclude or misrepresent customer segments.

Real-time adaptability is another limitation. Some artificial intelligence systems are slow to adapt to real-time market changes without retraining. They require constant updates and monitoring to remain relevant. Artificial intelligence systems must be continuously trained to adapt to these changes. For example, a sudden change in market conditions or customer sentiment (e.g., during a global crisis) can make existing models less reliable.

An important limitation of artificial intelligence use is measuring the effectiveness and system integration. Evaluating the real impact of artificial intelligence on marketing performance remains a challenge. It is often difficult to isolate the contribution of AI tools within broader digital marketing strategies. **For example**, when an AI recommendation tool increases sales, it is not always clear whether this improvement results directly from AI or from other marketing factors Moreover, integrating artificial intelligence systems with existing CRM and legacy platforms can be complex.

4. Recommendations for Responsible AI Use and Future of AI in Marketing

To maximize the benefits of artificial intelligence in marketing while mitigating its limitations, organizations should adopt strategic, ethical, and operational measures. The following recommendations provide a roadmap for effective artificial intelligence implementation. See Table 2.

Table 2: Recommendations for Responsible Artificial Intelligence Use AI in Marketing

Recommendations
<ol style="list-style-type: none"> 1. Ensure High-Quality Data Governance 2. Prioritize Ethical and Privacy Concerns Artificial Intelligence Use 3. Invest in Training and Change Management 4. Balance Human Creativity with Artificial Intelligence Insight 5. Leverage Scalable and Cost-Effective Solutions/Start Small and Scale Strategically 6. Monitor and Evaluate Artificial Intelligence Performance /Test, Measure, and Iterate

Source: Author's research

Ensure High-Quality Data Management

Accurate artificial intelligence outputs depend on high-quality data, and companies should ensure data governance. They should invest in robust data collection, cleaning, and validation processes (Chen, Chiang & Storey, 2012). Regular audits and monitoring data sources and models can help identify biases, inconsistencies, or gaps in datasets, ensuring AI-driven insights are reliable and actionable.

Prioritize Ethical and Privacy Concerns Artificial Intelligence Use

Organizations must implement clear data governance policies and comply with legal frameworks such as GDPR and CCPA (Voigt & Von dem Bussche, 2017). Focus on fairness,

transparency, and accountability in artificial intelligence practices. Provide customers with control over how their data is used. Transparency with consumers regarding data usage and AI-driven decisions enhances trust. Ethical guidelines should be established for artificial intelligence applications in marketing, including limits on personalized targeting and algorithmic decision-making.

Build Artificial Intelligence Expertise and Organizational Readiness

Build artificial intelligence expertise and organizational readiness. This requires investing in training and change management. Hiring or training employees with expertise in AI, machine learning, and data analytics is key. Foster a culture of data-driven decision-making. Cross-functional teams should collaborate to integrate AI insights with marketing strategy. Leadership support and change management practices are essential to overcome resistance and foster a culture of innovation (Davenport & Ronanki, 2018).

Balance Human Creativity with Artificial Intelligence Insights

Use artificial intelligence to support, not replace, human creativity and strategy. Combine machine learning with human judgment in campaign design and messaging. Marketers should use artificial intelligence for repetitive tasks, data analysis, and predictive insights, while maintaining human oversight for strategic planning, creative content development, and nuanced consumer understanding (Wilson & Daugherty, 2018).

Leverage Scalable and Cost-Effective Solutions: Start small with projects like email personalization, customer segmentation, or chatbots. Scale artificial intelligence based on ROI and business impact. For small to medium-sized businesses or organizations with limited resources, cloud-based artificial intelligence platforms and SaaS solutions provide scalable alternatives to expensive in-house implementations. Phased deployments and pilots can help assess ROI and refine artificial intelligence strategies before full adoption.

Monitor and Evaluate Artificial Intelligence Performance Test, measure, and iterate. Use A/B testing and feedback to continuously improve artificial intelligence results. Track key performance indicators (KPIs) such as conversion rate, engagement, and customer satisfaction. Continuous monitoring of artificial intelligence systems ensures performance remains aligned with organizational goals (Chui, Manyika & Miremadi, 2018). Key performance indicators should be defined for artificial intelligence driven marketing activities, allowing for iterative improvement and adaptation to changing consumer behavior or market conditions.

By following these recommendations, organizations can harness the transformative potential of artificial intelligence while mitigating risks, ensuring sustainable and ethical marketing practices. After analyzing the use of artificial intelligence in marketing, the challenges and limitations that companies face, and recommendations for the responsible use of artificial intelligence in marketing, it is necessary to point out the changes that will occur in the future regarding the use of artificial intelligence in marketing

Emerging Trends and Future Directions: It discusses the future of artificial intelligence in marketing, including its impact on customer experience, brand relationships, and the development of new business models. The future of artificial intelligence in marketing is poised for rapid advancement, driven by technological innovation, evolving consumer expectations, and increased data availability. Several trends are likely to shape the next decade of AI-powered marketing.

Key trends include Hyper-Personalization at Scale, Integration with Emerging Technologies, Explainable and Transparent artificial intelligence, Ethical and Responsible artificial intelligence Practices, AI-Driven Creativity, Autonomous Marketing Systems.

Artificial intelligence will enable marketers to deliver increasingly personalized experiences to consumers by leveraging real-time behavioral data and predictive analytics (Kumar & Sharma, 2021). Advanced machine learning algorithms will allow brands to tailor content, recommendations, and offers to individual preferences at scale, creating more meaningful customer interactions.

Artificial intelligence will increasingly integrate with technologies such as augmented reality (AR), virtual reality (VR), and the Internet of Things (IoT) to create immersive marketing experiences (Pantano, Pizzi, Scarpi & Dennis, 2020). For example, AI-driven AR applications could allow consumers to virtually try products, while IoT-enabled devices provide personalized content based on contextual data.

Future artificial intelligence systems are expected to become more transparent and interpretable, addressing the “black box” problem (Gunning & Aha, 2019). Explainable artificial intelligence will help marketers understand how predictions are made, improving decision-making and fostering consumer trust.

As artificial intelligence adoption grows, ethical considerations will remain central. Companies will increasingly implement responsible artificial intelligence practices, including bias mitigation, fairness in algorithmic decisions, and protection of consumer privacy (Jobin, Ienca & Vayena, 2019). Ethical artificial intelligence will become a key differentiator in brand reputation and customer loyalty.

Artificial intelligence will not only optimize marketing processes but also contribute to creative endeavors. Generative artificial intelligence models will assist in producing content such as videos, music, and interactive campaigns, enhancing the creative capabilities of marketing teams (OpenAI, 2023). Coca-Cola, for instance, has already experimented with AI-generated content for targeted campaigns, showcasing the potential of machine-assisted creativity (Brow & White, 2021).

The development of fully autonomous artificial intelligence marketing systems is anticipated, where artificial intelligence can independently execute marketing campaigns, monitor performance, and adjust strategies in real time (Chui, Manyika & Miremadi, 2018). While human oversight will remain essential, these systems could revolutionize campaign efficiency and responsiveness.

5. Conclusion

Artificial intelligence has fundamentally transformed marketing by enabling companies to analyze vast amounts of data, personalize customer experiences, optimize campaigns, and improve overall efficiency. Key areas of the use of artificial intelligence in marketing include customer insight, segmentation, predictive analytics, personalized marketing, chatbots, campaign optimization, content generation, sales forecasting, lead scoring and marketing automation. Artificial intelligence has redefined the boundaries of marketing by enhancing efficiency, precision, and personalization.

However, the adoption of artificial intelligence is not without limitations and challenges. Technical limitations, ethical and privacy concerns, organizational readiness, overreliance on artificial intelligence, and resource constraints present significant obstacles that must be addressed to ensure successful implementation. Companies that ignore these challenges risk inefficiencies, consumer distrust, and potential regulatory repercussions.

To address these challenges and limitations, marketers should adopt a framework for responsible artificial intelligence governance. This paper provides several recommendations to mitigate these challenges, including investing in high-quality data management, implementing ethical artificial intelligence practices, developing organizational expertise, balancing human creativity with artificial intelligence insights, leveraging scalable solutions, and continuously monitoring artificial intelligence performance. By following these strategies, organizations can maximize the value of artificial intelligence while maintaining responsible and sustainable marketing practices.

The future of artificial intelligence in marketing lies in its integration with emerging technologies such as augmented reality, blockchain, and the Internet of Things (IoT). These integrations will enable hyper-personalized, real-time consumer experiences. However, as artificial intelligence systems become more autonomous, ethical oversight and regulatory frameworks must evolve accordingly. Transparency and accountability will be crucial in ensuring that remains a tool for empowerment rather than manipulation. The development of explainable AI (XAI) is expected to improve understanding of algorithmic decisions and foster more ethical marketing practices.

In conclusion, artificial intelligence represents both a transformative opportunity and a complex challenge in marketing. Success depends on a balanced approach that integrates technological innovation with human judgment, ethical responsibility, and organizational readiness.

References

[Adzooma - AI for Smarter Advertising Optimization](#)

- Brown, L., & White, K. (2021). Social Media Marketing with AI: Coca-Cola Case Study. *Journal of Brand Strategy*, 10(3), 201–215. <https://doi.org/10.1057/s41262-021-00255-1>
- Bughin, J., Seong, J., Manyika, J., Chui, M., & Joshi, R. (2018). *Notes from the AI Frontier: Applications and Value of Deep Learning*. McKinsey Global Institute.
- Cadwalladr, C., & Graham-Harrison, E. (2018). *Revealed: 50 Million Facebook Profiles Harvested for Cambridge Analytica in Major Data Breach*. The Guardian. <https://www.theguardian.com/news/2018/mar/17/cambridge-analytica-facebook-influence-us-election>
- Chaffey, D. (2022). *Artificial Intelligence in Digital Marketing: Tools and Techniques*. London, UK: Pearson.
- Chaffey, D. (2023). *Digital Marketing: Strategy, Implementation and Practice*. New Jersey: Pearson Education.
- Chen, H., Chiang, R., & Storey, V. C. (2012). Business Intelligence and Analytics: From Big Data to Big Impact. *MIS Quarterly*, 36(4), 1165–1188. <https://doi.org/10.2307/41703486>
- Chui, M., Manyika, J., & Miremadi, M. (2018). *Notes from the AI Frontier: Autonomous Systems in Business*. McKinsey Global Institute.
- Chui, M., Manyika, J., & Miremadi, M. (January 2018). *What AI Can and Cannot Do for Your Business*. McKinsey Quarterly, 1-11.
- Davenport, T., & Ronanki, R. (2018). Artificial Intelligence for the Real World. *Harvard Business Review*, 96(1), 108–116.
- Davis, M., & Wilson, H. (2020). AI Chatbots in Customer Service: HubSpot Implementation. *Customer Experience Journal*, 7(2), 120–134. <https://doi.org/10.1080/2041233X.2020.1754362>

- Green, T. (2019). *Predictive Analytics for Media Streaming Platforms*. New York, NY: Springer.
- Gunning, D., & Aha, D. (2019). DARPA’s Explainable Artificial Intelligence (XAI) Program. *AI Magazine*, 40(2), 44–58. <https://doi.org/10.1609/aimag.v40i2.2850>
- Jaligama, S. (2025). Problems Faced by Digital Marketing Agencies Due to AI Analytics. <https://urn.fi/URN:NBN:fi:amk-2025061623099>
- Jobin, A., Ienca, M., & Vayena, E. (2019). The Global Landscape of AI Ethics Guidelines. *Nature Machine Intelligence*, 1, 389–399. <https://doi.org/10.1038/s42256-019-0088-2>
- Kumar, D., & Suthar, N. (2024). Ethical and legal challenges of AI in marketing: an exploration of solutions Available to Purchase. *Journal of Information, Communication and Ethics in Society* 22 (1). 124–144. <https://doi.org/10.1108/JICES-05-2023-0068>
- Kumar, V., & Sharma, R. (2021). AI-Driven Customer Engagement. *Journal of Marketing Analytics*, 9(2), 45–60. <https://doi.org/10.1057/s41270-021-00123-4>
- Le, D., Chung, K., Quach, S. & Thaichon, P. (2023). Introduction to artificial intelligence (AI): Definition and scope of AI.; in Thaichon, P. & Quach, S. (Ed.) (2023). *Artificial Intelligence for Marketing Management*. London: Routledge Studies in Marketing.
- Nguyen, H., & Simkin, L. (2022). Data Quality Challenges in AI Marketing Systems. *Journal of Business Research*, 145, 398–410. <https://doi.org/10.1016/j.jbusres.2022.01.021>
- OpenAI. (2023). *Generative AI Applications for Marketing*. San Francisco, CA: OpenAI. <https://openai.com>
- OpenAI. (2023). *GPT Models for Marketing and Content Generation*. San Francisco, CA: OpenAI. <https://openai.com>
- Pantano, E., Pizzi, G., Scarpi, D., & Dennis, C. (2020). Competing During a Pandemic? Retailers’ Ups and Downs During COVID-19. *Journal of Business Research*, 116, 209–213. <https://doi.org/10.1016/j.jbusres.2020.05.036>
- Patel, N. (2021). AI-Powered Customer Segmentation Strategies. *Journal of Marketing Research*, 58(4), 332–349. <https://doi.org/10.1177/0022243721990030>
- Ribeiro, M. T., Singh, S., & Guestrin, C. (2016). “Why Should I Trust You?”: Explaining the Predictions of Any Classifier. *Proceedings of the 22nd ACM SIGKDD International Conference on Knowledge Discovery and Data Mining*. <https://doi.org/10.1145/2939672.2939778>
- Smith, A., & Jones, B. (2020). Machine Learning in E-Commerce: Case Studies from Amazon. *International Journal of Retail & Distribution Management*, 48(5), 455–472. <https://doi.org/10.1108/IJRDM-03-2020-0112>
- Smith, A., & Jones, B. (2020). Machine Learning in E-Commerce: Case Studies from Amazon. *International Journal of Retail & Distribution Management*, 48(5), 455–472. <https://doi.org/10.1108/IJRDM-03-2020-0112>
- Smith, J. (2023). *Artificial Intelligence in Marketing: A Comprehensive Guide*. New York, NY: Marketing Press
- Suleyman, M., & Bhaskar, M. (2024). The Coming Wave: Technology, Power and Twenty-first Century’s Greatest Dilemma. Entropia
- Thaichon, P., & Quach, S. (Ed.) (2023). *Artificial intelligence in Marketing Management*. London: Routledge Studies in Marketing.

Voigt, P., & Von dem Bussche, A. (2017). *The EU General Data Protection Regulation (GDPR)*. Cham, Switzerland: Springer.

Wilson, H., & Daugherty, P. (2018). Collaborative Intelligence: Humans and AI Are Joining Forces. *Harvard Business Review*, 96(4), 114–123.