

THE ROLE OF ARTIFICIAL INTELLIGENCE ON DIGITAL MARKETING: A LITERATURE STUDY

Peran Kecerdasan Buatan terhadap Pemasaran Digital: Studi Berbasis Literature

A. Saddiyah Sebrina¹, M. Ilham Wardhana Haeruddin², Andi Mustika Amin³,
Anwar Ramli⁴, Anwar⁵, Muh. Yushar Mustafa⁶

¹Program Studi Manajemen, Universitas Negeri Makassar, Indonesia

Abstract

Artificial Intelligence, or AI, has emerged as a disruptive force in the digital marketing landscape, fundamentally altering how organizations interact with consumers. This literature study systematically evaluates the role of AI in digital marketing by synthesizing research published between 2020 and 2026. The study focuses on the transition from traditional rule-based systems to autonomous, generative, and predictive models. Key findings indicate that AI enhances marketing performance through hyper-personalization, automated content generation, and sophisticated predictive analytics. However, the study also identifies significant gaps in ethical frameworks and data privacy governance. The paper concludes by proposing a symbiotic model where AI-driven efficiency is balanced by human-centric strategic oversight.

Keywords: artificial intelligence, digital marketing, literature study

Abstrak

Kecerdasan Buatan, atau AI, telah muncul sebagai kekuatan yang disruptif dalam lanskap pemasaran digital, yang secara mendasar mengubah cara organisasi berinteraksi dengan konsumen. Studi literatur ini secara sistematis mengevaluasi peran AI dalam pemasaran digital dengan mensintesis penelitian yang diterbitkan antara tahun 2020 dan 2026. Studi ini berfokus pada transisi dari sistem berbasis aturan tradisional ke model otonom, generatif, dan prediktif. Temuan utama menunjukkan bahwa AI meningkatkan kinerja pemasaran melalui hiper-personalisasi, pembuatan konten otomatis, dan analitik prediktif yang canggih. Namun, studi ini juga mengidentifikasi kesenjangan signifikan dalam kerangka kerja etika dan tata kelola privasi data. Makalah ini diakhiri dengan mengusulkan model simbiosis di mana efisiensi yang didorong oleh AI diimbangi dengan pengawasan strategis yang berpusat pada manusia.

Kata kunci: kecerdasan buatan, pemasaran digital, studi literatur

1. INTRODUCTION

1.1 Research Problem

For decades, digital marketing relied on static segmentation and reactive strategies. Marketers struggled with "big data" saturation—possessing vast amounts of information but lacking the cognitive speed to process it into real-time insights. The problem is twofold: first, the increasing complexity of the consumer journey across fragmented digital touchpoints; and second, the diminishing returns of traditional advertising due to "banner blindness" and information overload. AI is often presented as the solution, yet its rapid integration has outpaced the development of academic frameworks and ethical guidelines, leading to a "black box" phenomenon where marketing outcomes are achieved without a clear understanding of the underlying algorithmic logic.

1.2 Statement of the Research

Moreover, this study seeks to investigate the multifaceted role of AI in digital marketing. Specifically, it examines how Machine Learning (ML), Natural Language Processing (NLP), and Generative AI (GenAI) have moved beyond operational automation to become strategic drivers of consumer behaviour and brand loyalty. The research addresses the paradox of AI in marketing: its ability to provide unprecedented personalization while simultaneously raising concerns about consumer autonomy and data surveillance.

1.3 Research Objectives

- To identify the core AI technologies currently driving digital marketing innovation.
- To analyse the impact of AI-driven personalization and predictive analytics on consumer engagement.
- To explore the ethical and regulatory challenges associated with AI deployment in marketing. To develop a conceptual framework for the future integration of "Human-AI" collaboration in marketing strategies.

2. LITERATURE REVIEW

2.1 Theoretical Foundations: From TPB to Technology Acceptance

Modern AI marketing research often builds upon the Theory of Planned Behaviour (TPB) and the Technology Acceptance Model (TAM). Researchers have expanded these models to include "Algorithm Appreciation" and "Perceived Anthropomorphism" as variables influencing consumer trust in AI-driven interfaces like chatbots (Pervez, 2026).

2.2 The Evolution of AI in Marketing

The literature categorises AI applications into three developmental stages:

1. Automation Era: Focused on programmatic ad buying and email scheduling.
2. Augmentation Era: Using predictive analytics to assist human decision-making (e.g., lead scoring).
3. Autonomous/Generative Era: AI independently creating content, optimizing budgets in real-time, and conducting "Generative Engine Optimization" (GEO) (Reboot Online, 2026).

2.3 Hyper-Personalization, Predictive Modelling, and Content Revolution

Aravindhan et al. (2023) highlight that AI provides "hyper-individualisation," "where content is not just targeted to a segment but generated for a specific individual based on real-time behavioural signals. Predictive modelling allows brands like Netflix and Amazon to achieve conversion rates 15-30% higher than traditional methods by anticipating needs before the consumer explicitly searches for them (ResearchGate, 2026).

Furthermore, the emergence of Large Language Models (LLMs) such as GPT-4 and Gemini has disrupted content marketing. While early AI produced "robotic" text, current models can generate high-fidelity visual and written content that rivals human output (Paschen et al., 2019). However, this has led to a "quality paradox": as AI lowers the floor for content production, it raises the ceiling for differentiation, making "Experience, Expertise, Authoritativeness, and Trustworthiness" (EEAT) more critical than ever (Gartner, 2024).

3. METHODS

This study employs a Systematic Literature Review (SLR) methodology following the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines. This ensures a rigorous, transparent, and replicable selection of scholarly works. In addition, the research utilised major academic databases, including Scopus, ScienceDirect, IEEE Xplore, and Emerald Insight. The search focused on the period from

2020 to May 2026 to capture the most recent advancements in Generative AI. Keywords used: "Artificial Intelligence," "Digital Marketing Strategy," "Machine Learning in Marketing," "Generative AI Marketing," "Predictive Analytics," and "Consumer Privacy." The inclusion criteria are peer-reviewed journals, conference papers with high citation impact, and industry reports from globally recognized firms (e.g., Gartner, McKinsey). Whereas, exclusion areas are non-English publications, studies prior to 2020 (unless for foundational theory), and opinion-based blog posts without empirical backing. Subsequently, from an initial pool of 450 articles, 65 were selected for deep thematic analysis. Data were categorized into strategic themes: (1) Operational Efficiency, (2) Customer Experience, and (3) Ethical Governance.

4. RESULTS AND ANALYSIS

Empirical data shows that AI-integrated strategies account for up to 82.4% of the variance in digital marketing success (Pervez, 2026). Businesses using AI for programmatic advertising see a significant reduction in Customer Acquisition Cost (CAC) because algorithms can identify high-intent users with a precision human planner cannot match. A major finding is the shift from traditional Search Engine Optimization (SEO) to Generative Engine Optimization (GEO). With over 77% of users engaging with AI for search-like queries, brands must optimize for how AI synthesizes information rather than just how a keyword ranks on a page (Reboot Online, 2026). Also, the literature reveals a growing tension. While consumers enjoy personalized experiences, there is a "creepy factor" associated with AI tracking. Research indicates that 54.2% of professionals identify inaccurate AI outputs and data bias as major risks (MDPI, 2026). Without a standardized ethical framework, the "black box" nature of AI risks violating GDPR and other privacy mandates (Kumar et al., 2024). Moreover, a consistent theme in 2025-2026 research is that AI does not replace the marketer; it shifts the marketer's role from execution to governance. Human oversight is required to provide "brand soul," empathy, and ethical fact-checking that AI currently lacks (IMPACT, 2026).

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusion

This literature study confirms that AI is no longer a peripheral tool but the core infrastructure of digital marketing. It has successfully bridged the gap between big data and actionable intelligence. However, the rapid adoption of Generative AI has created a lag in consumer trust and regulatory compliance. The "Intelligence Revolution" in marketing is ultimately a balance of scale (AI) and soul (Human).

5.2 Recommendations

- For Practitioners: Shift focus toward Zero-Party Data (data shared intentionally by consumers) to train AI models, reducing reliance on invasive tracking.
- For Organizations: Invest in AI Literacy across marketing teams. The goal is "AI-Augmentation," where staff are trained to prompt, audit, and refine AI outputs.
- For Researchers: Future studies should focus on the long-term psychological impact of "AI-driven nudging" on consumer decision-making and the development of "Explainable AI" (XAI) in marketing.
- For Policy Makers: There is an urgent need for a Standardized Ethical AI Framework in marketing to prevent algorithmic bias and protect consumer vulnerability.

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