



Impact of AI on digital marketing strategies

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Abstract

Artificial Intelligence (AI) has transformed digital marketing by enabling businesses to deliver personalized customer experiences, automate marketing activities and improve decision-making through data analytics. This study examines the impact of AI on digital marketing strategies by analyzing consumer awareness, acceptance and perceptions regarding AI-powered marketing tools. Primary data were collected from college students using a structured questionnaire, and percentage analysis was used to interpret the responses. The findings indicate that AI positively influences customer engagement, personalized recommendations, targeted advertising and marketing efficiency. Respondents also recognized the growing importance of chatbots, predictive analytics and Generative AI in modern digital marketing. However, concerns regarding data privacy, transparency and ethical use of AI continue to influence customer trust. The study concludes that AI has become an essential component of digital marketing strategies and recommends responsible AI adoption to achieve sustainable business growth and improved customer satisfaction.

Keywords: Artificial Intelligence, digital marketing, customer engagement, personalization, marketing automation

Introduction

Artificial Intelligence has become one of the most influential technologies in the digital business environment. The rapid growth of social media, e-commerce, online advertising and mobile applications has generated enormous amounts of customer data, making traditional marketing approaches less effective for analysing consumer behaviour. AI enables businesses to process large volumes of data, identify customer preferences, automate marketing activities and deliver personalized experiences. Digital marketing has shifted from mass communication to customer-centric marketing, where businesses aim to provide relevant content to the right customer at the right time. Technologies such as chatbots, recommendation systems, predictive analytics and Generative AI have significantly improved customer interaction and campaign performance. AI-powered search and marketing automation are also changing how businesses attract, engage and retain customers. The increasing adoption of AI in digital marketing creates opportunities for businesses to improve efficiency, customer satisfaction and competitive advantage. At the same time, issues such as data privacy, algorithmic bias and transparency require responsible implementation. Therefore, this study examines the impact of AI on digital marketing strategies and consumer perceptions toward AI-powered marketing practices.

Statement of the Problem

The rapid adoption of Artificial Intelligence has significantly changed digital marketing practices, but many organizations still face challenges in understanding how AI influences customer engagement, buying behaviour and marketing performance. Although AI-powered technologies such as chatbots, personalized recommendations and predictive analytics are increasingly used, concerns regarding data privacy, transparency, ethical practices and

customer trust continue to affect their acceptance. Therefore, it is necessary to examine the impact of AI on digital marketing strategies and understand consumer perceptions toward AI-driven marketing practices.

Objectives

- To examine the impact of Artificial Intelligence on digital marketing strategies.
- To evaluate the role of AI in delivering personalized customer experiences.
- To analyse the influence of AI on consumer buying behaviour.
- To study the growing importance of AI in digital marketing.

To analyse the role of AI in enhancing customer engagement.

Research Methodology

The study follows a descriptive research design to understand the impact of Artificial Intelligence on digital marketing strategies. Primary data were collected through a structured questionnaire from undergraduate college students. The respondents were selected using convenience sampling, as they actively use digital platforms and AI-enabled online services. Secondary data were collected from research articles, journals, books and official websites related to Artificial Intelligence and digital marketing.

Research Design: Descriptive Research

Area of Study: Undergraduate college students

Source of Data: Primary and Secondary Data

Sampling Technique: Convenience Sampling

Tool for Analysis: Percentage Analysis

Review of literature:

Ziakis and Vlachopoulou (2023) ^[1] conducted a systematic review of 211 studies and found that AI has become an

essential technology in digital marketing through machine learning, predictive analytics and social media optimization. Aljabari *et al.* (2024) ^[2] found that AI adoption among Small and Medium Enterprises improves marketing efficiency, customer targeting and business competitiveness. Ingriana *et al.* (2024) ^[3] reported that AI and Big Data significantly improve personalization and predictive marketing while identifying cost and privacy as major adoption challenges. Venkateswaran and Ngo (2025) ^[4] found that increasing consumer use of AI tools positively influences digital marketing acceptance and personalized customer experiences. Grewal *et al.* (2025) ^[5] explained that Generative AI is transforming marketing by improving content creation, customer engagement and strategic decision-making. Van Esch and Black (2021) ^[9] examined the role of Artificial Intelligence in customer engagement and reported that AI technologies improve customer interaction through

personalized communication, virtual assistants and automated marketing systems.

The study concluded that AI strengthens customer relationships when implemented effectively. Ponomarenko and Ponomarenko (2023) ^[10] analysed AI-based digital marketing practices and found that predictive analytics and intelligent recommendation systems help organizations improve campaign performance, customer satisfaction and marketing decision-making. Hasan (2025) ^[8] conducted a systematic review of AI applications in SEO and e-commerce marketing and found that AI-powered search optimization, content generation and data analysis improve online visibility and customer engagement, making AI an increasingly important tool for digital marketers.

Percentage Analysis:

Impact of artificial intelligence (ai) on digital marketing (primary data, n = 120)

Section	Item	No. of Respondents	Percentage (%)
Awareness	Yes	108	90.0%
	No	6	5.0%
	Not sure	6	5.0%
	Total	120	100%
Digital Platform	Instagram	75	62.5%
	YouTube	21	17.5%
	Google	18	15.0%
	Other	4	3.3%
	Facebook	2	1.7%
	Total	120	100%
Benefit of AI	Saves Time	56	46.7%
	Better Product Suggestions	27	22.5%
	Faster Customer Support	18	15.0%
	Personalized Experience	12	10.0%
	Better Offers	7	5.8%
	Total	120	100%
AI-Powered Customer Service	Chatbots	54	45.0%
	Live Chat	31	25.8%
	Phone Support	30	25.0%
	Email Support	5	4.2%
	Total	120	100%

Statement	Agree/strongly agree	Neutral	Disagree/strongly disagree
S1: AI helps improve marketing strategies	74.1%	22.5%	3.3%
S2: AI provides better personalized experience	67.5%	26.7%	5.8%
S3: AI-based marketing influences buying decisions	48.3%	45.0%	6.7%
S4: Comfortable with AI-based personalisation	45.9%	39.2%	15.0%
S5: Overall satisfied with AI in digital marketing	65.0%	30.0%	5.0%

Interpretation

The combined data (n = 120 respondents) shows a consistently positive but cautious reception of AI in digital marketing. Awareness is very high, with 90% of respondents already aware of AI's role in marketing, confirming that the concept is now mainstream among the surveyed audience. Instagram is by far the most-used digital platform (62.5%), well ahead of YouTube (17.5%) and Google (15%), indicating that AI-driven marketing efforts reach this audience mainly through Instagram rather than other channels.

Among the perceived benefits of AI, time-saving is valued most (46.7%), followed by better product suggestions (22.5%), suggesting respondents prioritize efficiency and relevance over other advantages such as offers or personalized experiences.

For AI-powered customer service, chatbots are the preferred channel (45.0%), with live chat (25.8%) and phone support (25.0%) fairly close behind, showing that while automation is favored, a meaningful share of respondents still prefer human-assisted channels.

The agreement statements reinforce this pattern: respondents most strongly agree that AI helps improve marketing strategies (74.1% agree) and provides better personalization (67.5% agree), reflecting broad confidence in AI's functional benefits. However, comfort with AI-based personalization specifically is comparatively lower (45.9% agree, 15.0% disagree) — the highest disagreement level in the entire dataset — indicating that while respondents value AI's outcomes, some unease remains around personalization and data use. Overall satisfaction with AI in digital marketing is high (65.0% agree, only 5.0% disagree),

suggesting that despite pockets of hesitation, the overall sentiment toward AI in this space is favorable.

Chi-Square Test Analysis: Significant Demographic Associations

Variables compared	Chi-square	P-value	Result	Inference
Educational Qualification x Awareness of AI	11.277	0.024	Significant	Education raises AI awareness
Gender x Preferred AI Customer Service	8.964	0.030	Significant	Gender shapes service-channel choice

(Source: Primary Data)

Interpretation: Only two demographic effects are statistically significant education predicts AI awareness ($p=0.024$)

and gender predicts customer-service preference ($p=0.030$); all other demographic comparisons tested were not significant.

One Way Anova: Agreement on Ai-Based Marketing Statements by Gender and Monthly Income Level

Factor	Statement	Sum of Squares	DF	Mean Square	F	Sig.
Gender	S1: AI helps improve marketing strategies	0.050	1	0.050	0.064	0.801
	S2: AI provides better personalized experience	0.613	1	0.613	0.803	0.372
	S3: AI-based marketing influences buying decisions	0.006	1	0.006	0.007	0.932
	S4: Comfortable with AI-based personalisation	0.613	1	0.613	0.676	0.412
	S5: Overall satisfied with AI in digital marketing	1.512	1	1.512	1.990	0.161
Monthly Income Level	S1: AI helps improve marketing strategies	4.678	3	1.559	2.050	0.111
	S2: AI provides better personalized experience	3.459	3	1.153	1.535	0.209
	S3: AI-based marketing influences buying decisions	0.948	3	0.316	0.413	0.744
	S4: Comfortable with AI-based personalisation	6.621	3	2.207	2.539	0.060
	S5: Overall satisfied with AI in digital marketing	4.941	3	1.647	2.215	0.090

Interpretation

All ten Sig. values (gender: 0.161–0.932; income: 0.060–0.744) exceed 0.05, so the null hypothesis is accepted throughout: neither gender nor monthly income level significantly affects respondents' agreement with the AI-based marketing statements. Perceptions of AI in digital marketing are broadly consistent across these demographic groups. The closest approach to significance is income level on S4, comfort with AI-based personalisation (Sig. = 0.060), suggesting a mild, non-significant trend worth noting for future research with a larger sample.

Discussion

The findings of the study indicate that Artificial Intelligence has become an important component of modern digital marketing strategies. Respondents generally expressed positive perceptions regarding AI-powered personalization, targeted advertising and automated customer support. These findings support earlier research that AI improves customer engagement through recommendation systems, predictive analytics and marketing automation. The study also highlights that AI helps businesses understand customer behaviour more effectively and supports data-driven marketing decisions. Personalized recommendations and AI-powered advertisements were found to attract greater consumer attention because they are based on individual interests and online behaviour. This indicates that AI has shifted digital marketing from a traditional mass communication approach towards a more personalized and customer-oriented marketing strategy.

The findings further reveal that AI-powered chatbots play an important role in improving customer service by providing quick responses and continuous assistance. Similarly, marketing automation helps organizations reduce

repetitive tasks, improve campaign management and increase operational efficiency. These results are consistent with previous studies, which emphasize that AI enhances marketing productivity while allowing marketers to focus on strategic and creative activities.

Another important observation is that AI-supported customer segmentation enables businesses to identify appropriate target audiences more accurately. By analysing customer preferences, browsing history and purchasing behaviour, AI helps organizations deliver relevant marketing messages through different digital channels. This improves customer engagement and increases the effectiveness of digital marketing campaigns.

The respondents also recognized the growing importance of Generative AI and AI-powered search in the digital marketing environment. These emerging technologies are changing how businesses create content, optimize search visibility and interact with customers. As digital platforms continue to evolve, marketers increasingly depend on AI to deliver faster, more relevant and more interactive customer experiences. However, the study also identifies certain challenges associated with AI adoption. Concerns regarding data privacy, cybersecurity, algorithmic bias and transparency continue to influence customer trust. Many respondents believe that organizations should use customer data responsibly and ensure ethical AI practices while implementing digital marketing strategies. These findings suggest that technological advancement alone is not sufficient; responsible AI implementation is equally important for maintaining long-term customer relationships. Overall, the discussion confirms that Artificial Intelligence has significantly transformed digital marketing by improving personalization, customer engagement, campaign performance and business decision-making. At the same time, businesses must balance innovation with ethical practices, transparency and data security to achieve

sustainable growth in the rapidly evolving digital marketing landscape.

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