



# International Journal of Multidisciplinary Research in Science, Engineering and Technology

*(A Monthly, Peer Reviewed, Refereed, Scholarly Indexed, Open Access Journal)*



**Impact Factor: 8.206**

**Volume 9, Issue 4, April 2026**



## International Journal of Multidisciplinary Research in Science, Engineering and Technology (IJMRSET)

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# Ethical Challenges in AI-Powered Digital Marketing

Divyansh Shah, Utpal Singh, Sundaley Dubey

DR. D.Y. Patil Dnyaan Prasad Global University, School of Management & Research, Pune, Maharashtra, India

**ABSTRACT:** Artificial Intelligence (AI) has emerged as a transformative force in digital marketing, enabling businesses to deliver personalized experiences, predictive insights, and automated customer interactions. While these advancements improve marketing efficiency and customer engagement, they also introduce significant ethical concerns. Issues such as data privacy violations, algorithmic bias, lack of transparency, and consumer manipulation have raised serious questions regarding the responsible use of AI in marketing practices. This study examines the major ethical challenges associated with AI-powered digital marketing and evaluates their impact on consumer trust and business sustainability. The research is based on secondary data analysis and aims to highlight the importance of ethical frameworks and regulatory compliance in ensuring responsible AI usage. The findings suggest that although AI enhances marketing performance, ethical negligence can undermine consumer confidence and damage brand reputation.

**KEYWORDS:** Artificial Intelligence, Digital Marketing, Ethics, Data Privacy, Algorithmic Bias, Transparency, Consumer Behaviour.

## I. INTRODUCTION

The rapid advancement of Artificial Intelligence has significantly transformed the landscape of digital marketing. Businesses increasingly rely on AI-driven tools such as chatbots, recommendation systems, and predictive analytics to understand consumer behavior and deliver personalized marketing strategies. These technologies enable companies to optimize customer engagement, improve decision-making, and enhance overall marketing effectiveness. Despite these benefits, the integration of AI in digital marketing raises critical ethical concerns. The collection and analysis of vast amounts of consumer data often occur without explicit consent, leading to privacy violations. Additionally, AI systems may exhibit algorithmic bias, resulting in unfair or discriminatory outcomes. The lack of transparency in AI decision-making processes further complicates the issue, as consumers are often unaware of how their data is being used. These challenges highlight the need for ethical considerations in the deployment of AI technologies in marketing. This research aims to explore these ethical issues and assess their implications for both businesses and consumers.

### Objectives of the Study:

1. To examine the key ethical challenges associated with the use of Artificial Intelligence in digital marketing, particularly in areas such as data privacy, transparency, and algorithmic bias.
2. To analyze the impact of AI-driven marketing practices on consumer trust, behavior, and decision-making.
3. To evaluate how ethical concerns influence brand reputation and long-term customer relationships.
4. To suggest the need for ethical frameworks and regulatory measures to ensure responsible and fair use of AI in digital marketing.

## II. LITERATURE REVIEW

**Malhotra & Malhotra (2025)** examined the role of AI in digital marketing and found that it significantly enhances consumer engagement through personalization and predictive analytics. However, the study also highlights challenges related to data privacy and the need for ethical transparency in AI-driven strategies.

**Choudhary (2025)** analyzed ethical challenges in AI-powered digital marketing, emphasizing issues such as consumer manipulation, algorithmic bias, and privacy concerns. The study suggests that excessive reliance on AI can undermine consumer autonomy, requiring ethical frameworks for responsible usage.

**Sameen (2025)** explored AI-powered predictive analytics and found that while it improves targeting and conversion rates, it also leads to significant ethical concerns, including consumer manipulation and lack of data transparency. The study reveals that a majority of consumers feel AI-driven advertising is invasive.



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**Karami, Shemshaki & Ghazanfar (2025)** investigated AI-driven personalization and identified key ethical issues such as privacy risks, algorithmic bias, and lack of transparency. The study concludes that although personalization improves engagement, it raises serious concerns about consumer autonomy and data protection.

**Bell, Olukemi & Broklyn (2024)** examined the effectiveness of AI-driven personalization in digital marketing and found that it enhances customer engagement and conversion rates. However, the research also highlights ethical concerns related to data privacy, consent, and potential algorithmic bias

### III. RESEARCH METHODOLOGY

**Research Design:** Descriptive research methodologies used

**Data Collection:** Primary data collected via structured questionnaire

**Sample Size:** 30 respondents.

**Method of Analysis:** Qualitative analysis and interpretation

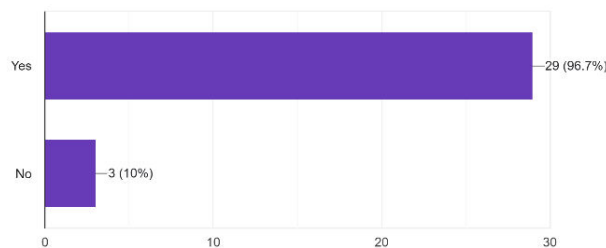
**Tools Used:** Comparative analysis and conceptual framework

#### Data Analysis and Interpretation:

Based on the survey responses:

#### Graph1

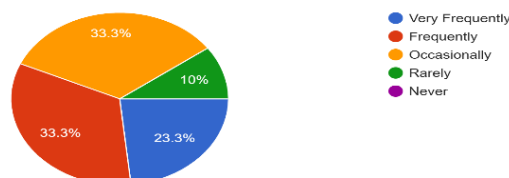
Q1. Are you aware that companies use Artificial Intelligence (AI) in digital marketing?  
30 responses



**Interpretation:** Almost all respondents (96.7%) are aware that companies use AI in digital marketing, indicating a very high level of awareness, with only a negligible portion unaware.

#### Graph2

Q2. How frequently do you encounter personalized ads online?  
30 responses



**Interpretation:** A majority of respondents encounter personalized ads frequently or occasionally (66.6%), while a smaller segment experiences them very frequently (23.3%) or rarely (10%), showing widespread exposure to targeted advertising.

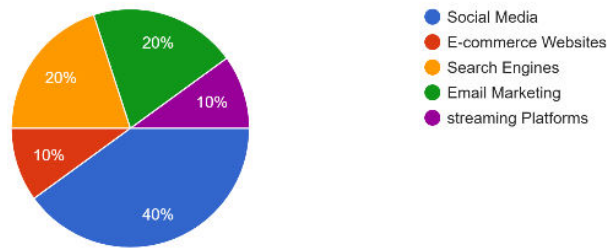


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Graph3

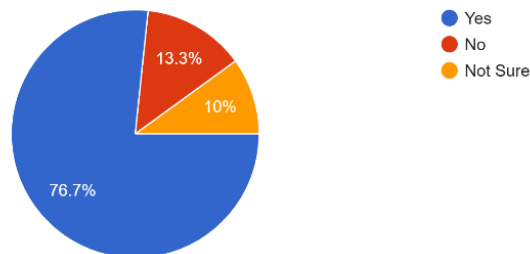
Q3. Which platforms do you mostly notice AI-driven marketing on?  
30 responses



**Interpretation:** Social media is the dominant platform (40%) where AI-driven marketing is most noticed, followed by search engines and email marketing (20% each), while e-commerce and streaming platforms have comparatively lower visibility.

Graph4

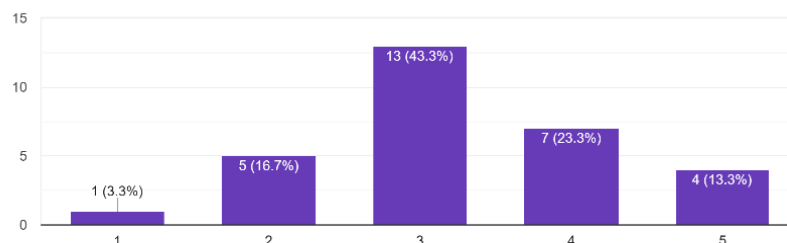
Q4. Do you believe AI improves your online shopping experience?  
30 responses



**Interpretation:** Most respondents (76.7%) believe AI improves their online shopping experience, though a small proportion remain uncertain (10%) or disagree (13.3%), indicating an overall positive perception.

Graph5

Q5. AI-powered marketing invades my personal privacy.  
30 responses



**Interpretation:** Opinions on privacy are mixed, with the highest responses being neutral (43.3%) and moderate agreement (23.3%–13.3%), suggesting that while concerns exist, they are not strongly polarized.

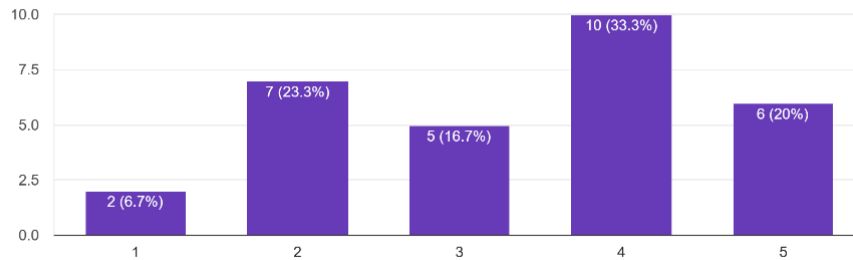


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Graph6

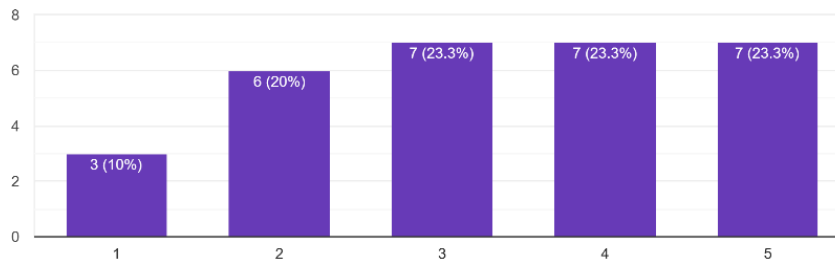
Q6. Companies collect more data than necessary for marketing purposes.  
30 responses



**Interpretation:** A significant portion of respondents agree (33.3%) or strongly agree (20%) that companies collect more data than necessary, indicating a clear perception of excessive data collection, though some remain neutral (16.7%).

Graph7

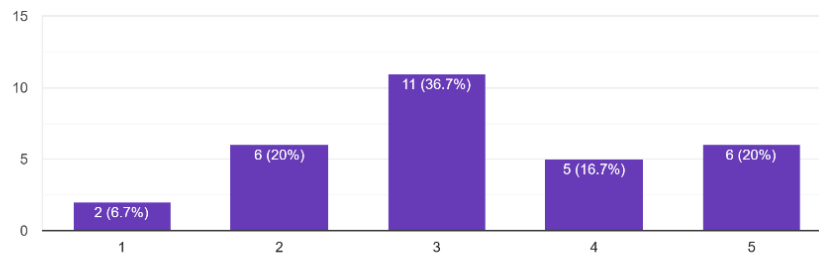
Q7. I am concerned about how my personal data is stored and used.  
30 responses



**Interpretation:** Concerns about personal data usage are relatively high, with most responses clustered around moderate to strong agreement (3–5 scale), showing that users are generally worried about how their data is stored and used.

Graph8

Q8. I trust companies to handle my data responsibly.  
30 responses



**Interpretation:** Trust in companies is moderate, with the highest responses being neutral (36.7%), while agreement and disagreement are fairly balanced, suggesting uncertainty rather than strong confidence in data handling.



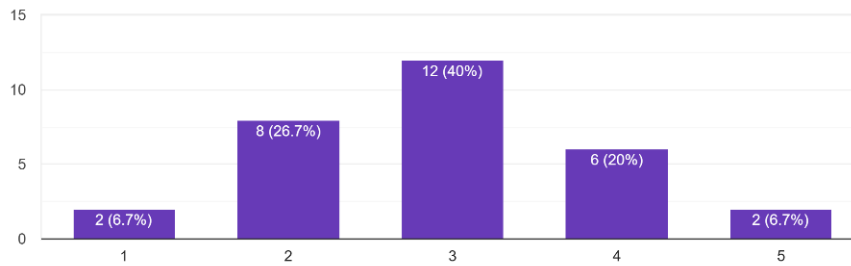
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Graph9

Q9. I feel uncomfortable when ads are too personalized.

30 responses

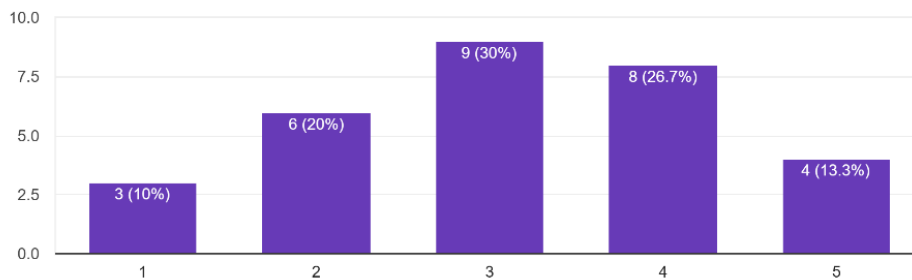


**Interpretation:** Most respondents feel moderately uncomfortable with overly personalized ads, as the highest response is neutral (40%) followed by some agreement (20%), indicating mild discomfort rather than strong opposition.

Graph10

Q10. Companies clearly inform users when AI is being used in marketing.

30 responses

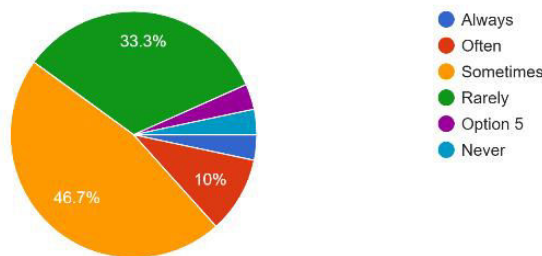


**Interpretation:** Opinions are mixed regarding transparency, with most respondents choosing neutral (30%) or agreement (26.7%), implying that companies are perceived as somewhat but not fully transparent about AI usage in marketing.

Graph11

Q11. I read privacy policies before accepting cookies.

30 responses



**Interpretation:** Most respondents only *sometimes* (46.7%) or *rarely* (33.3%) read privacy policies, indicating low engagement with detailed consent information, while very few consistently review them.

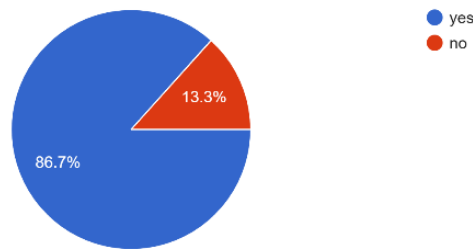


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Graph12

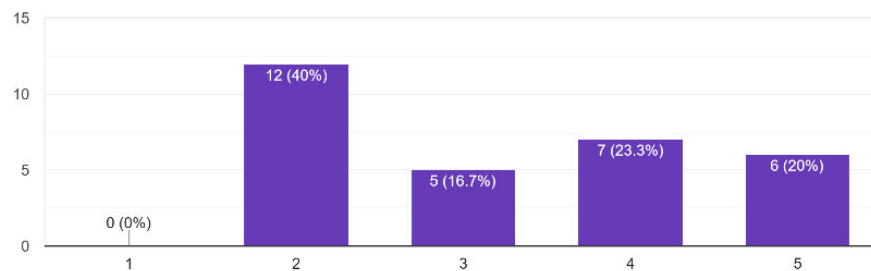
Q12. Have you ever refused cookies or tracking permissions?  
30 responses



**Interpretation:** A large majority (86.7%) have refused cookies or tracking permissions at least once, showing strong user awareness and active control over data privacy.

Graph13

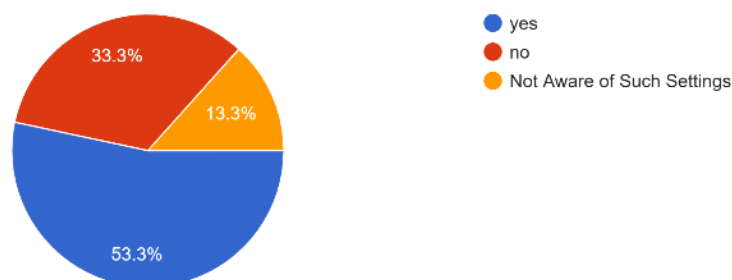
Q15. I understand how AI algorithms use my browsing behavior to show advertisements.  
30 responses



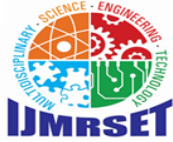
**Interpretation:** Understanding of how AI uses browsing behavior is moderate, with responses spread across agreement levels, though a higher concentration at lower agreement suggests partial or limited understanding among many users.

Graph14

Q17. Have you ever adjusted your ad preferences/settings on any platform?  
30 responses



**Interpretation:** Over half of the respondents (53.3%) have adjusted their ad preferences, indicating proactive behavior, but a notable portion either has not (33.3%) or is unaware of such settings (13.3%).

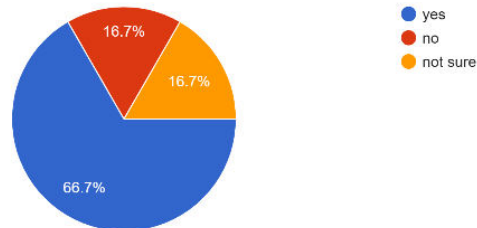


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### Graph15

Q18. Have you ever suspected price differences for the same product on different devices/accounts?  
30 responses



**Interpretation:** A significant majority (66.7%) suspect price differences across devices or accounts, highlighting strong user skepticism toward algorithmic pricing, while a smaller segment remains unsure or disagrees.

### IV. RESULTS & FINDINGS

The study reveals that while AI enhances efficiency and personalization in digital marketing, it also introduces substantial ethical risks. Data privacy concerns emerge as the most prominent issue, followed by algorithmic bias and transparency challenges. The research also finds that ethical lapses negatively impact consumer trust, which in turn affects brand loyalty and long-term business success. Furthermore, the absence of clear ethical guidelines and regulatory compliance increases the likelihood of misuse of AI technologies in marketing.

### V. CONCLUSION

AI-powered digital marketing offers significant advantages in terms of efficiency, personalization, and data-driven decision-making. However, these benefits are accompanied by serious ethical challenges that cannot be overlooked. Organizations must adopt responsible AI practices by ensuring transparency, protecting consumer data, and minimizing bias in algorithms. The development and implementation of ethical frameworks and regulatory standards are essential for promoting accountability and trust. Ethical marketing practices not only safeguard consumer interests but also contribute to sustainable business growth and long-term success.

### REFERENCES

1. Malhotra, P., & Malhotra, M. (2025). *The role of AI in optimizing consumer engagement in digital marketing: Opportunities, challenges, and ethical considerations*. International Research Journal of Humanities and Interdisciplinary Studies (IRJHIS), 6(8).
2. Choudhary, M. (2025). *The algorithmic persuader: Ethical challenges in AI-powered behavioral manipulation in digital marketing*. RAIS Conference Proceedings.
3. Sameen, T. (2025). *AI-powered predictive analytics in marketing: Ethical concerns surrounding consumer manipulation and privacy*. International Journal of Social Sciences and Management Review, 8(3).
4. Karami, A., Shemshaki, M., & Ghazanfar, M. A. (2025). *Exploring the ethical implications of AI-powered personalization in digital marketing*. Data Intelligence, 7, 1035–1084.
5. Bell, C., Olukemi, A., & Brooklyn, P. (2024). *AI-driven personalization in digital marketing: Effectiveness and ethical considerations*. Preprints.org.
6. Primary Data collected through Survey (Excel Responses)



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