



THE IMPACT OF AI ON ORGANIC SOCIAL MEDIA MARKETING

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ABSTRACT:

Artificial Intelligence (AI) is a transformative force in computer science, utilizing algorithms to mimic human thought processes. Machine learning, a crucial aspect, enables computers to learn and improve from data. AI has already profoundly impacted daily life, offering convenience through virtual assistants, personalization in digital experiences, healthcare advancements, road safety with self-driving cars, accessibility features, and smart home automation. However, concerns such as privacy, job disruption, bias, security risks, and ethical considerations highlight the need for careful management and ethical implementation of AI technologies.

KEYWORDS: artificial intelligence (AI), social media marketing, Digital media

INTRODUCTION

Artificial Intelligence (AI) stands as a captivating frontier in computer science, aiming to craft intelligent machines capable of mimicking human thought processes and actions. At its core, AI relies on algorithms, akin to step-by-step recipes guiding computers in processing information and making decisions. Machine learning, a vital facet of AI, involves teaching computers through examples, showcasing the technology's capability to learn and improve from data.

The impact of AI on daily life is already profound, with notable contributions in various domains:

- **Convenience:** Virtual assistants like Siri and Alexa exemplify AI's role as digital helpers, streamlining daily tasks, answering questions, and managing smart devices for enhanced convenience.



- **Personalization:** AI analyzes online behavior to deliver tailored recommendations, ensuring enjoyable and relevant digital experiences, whether suggesting movies, music, or products.
- **Healthcare Advances:** AI aids medical professionals in accurate disease diagnosis, interpretation of complex medical images, and formulation of personalized treatment plans, leading to improved patient care and faster diagnoses.
- **Safety on the Road:** Self-driving cars leverage AI for navigation and collision avoidance, promising to reduce traffic accidents and enhance road safety.
- **Accessibility:** AI-driven features like speech recognition and text-to-speech technologies empower individuals with disabilities, facilitating easier access to digital content and device interaction.
- **Smart Homes:** AI enabled home automation, optimizing energy consumption, enhancing security, and providing convenience through voice and app control.

Despite these benefits, AI introduces noteworthy concerns:

- **Privacy:** AI often requires access to personal data for personalized services, sparking concerns about data privacy and potential misuse.
- **Job Disruption:** AI and robotics-driven automation may lead to job displacement in certain industries, necessitating workforce preparation for AI-related changes.
- **Bias and Fairness:** AI algorithms can inherit biases from training data, potentially perpetuating discrimination. Ensuring fairness and transparency in AI systems is essential.
- **Security Risks:** AI systems are susceptible to hacking and misuse, posing cybersecurity risks that need addressing to protect sensitive data.
- **Ethical Considerations:** As AI becomes more autonomous, ethical questions arise concerning decision-making, accountability, and potential consequences of AI actions.



REVIEW OF LITERATURE

1. Dimitris C. Gkikas & Prokopis K. Theodoridis

“Artificial Intelligence (AI) Impact on Digital Marketing Research Date: 29 may 2019

This paper explores the current landscape of artificial intelligence (AI) applications within the field of digital marketing. It identifies key publications that serve as foundational works, identifies areas where there is a lack of presence or absence, discusses potential reasons for these gaps, and proposes a machine learning model suitable for various digital marketing scenarios.

2. Yogesh K. Dwivedi & Elvira Ismagilova

“Setting the future of digital and social media marketing research: Perspectives and research propositions “Date: August 2021

This study provides a noteworthy and timely contribution to researchers and practitioners by presenting challenges and opportunities. It emphasizes the existing limitations in current research, delineates research gaps, and formulates questions and propositions aimed at advancing knowledge in the field of digital and social marketing.

3. Gökhan Aydin

“Social media engagement and organic post effectiveness: A roadmap for increasing the effectiveness of social media use in hospitality industry” Date: 29 march 2019

The findings underscored the positive impact of interactive and visually compelling content, emphasizing the importance of content types in fostering increased engagement among followers. Additionally, the location of the facility and its categorization (such as hotel, holiday village, thermal hotel) were identified as influential factors affecting follower interactions.

4. Beibei Dong , Mengzhou Zhuang

“Tales of Two Channels: Digital Advertising Performance Between AI Recommendation and User Subscription Channels”Date: July 12, 2023

This study investigates the variations in the performance of in-feed advertisements concerning click-through rates and conversion rates across subscription and recommendation channels. It also explores whether these effects are influenced by ad intrusiveness and moderated by ad attributes.

5. Wael Basri



“Examining the Impact of Artificial Intelligence (AI)-Assisted Social Media Marketing on the Performance of Small and Medium Enterprises: Toward Effective Business Management in the Saudi Arabian Context”

Date: 1 dec 2019

This research stands out for its exploration of the significant role of AISMM practices in enhancing SMEP, with effective business management acting as a mediating factor. The implications of this study suggest that practitioners can benefit from leveraging AISMM to improve performance by addressing various marketing challenges.

6. Preeti Singh ,Amit Verma

“Implications & Impact of Artificial Intelligence in Digital Media: With Special Focus on Social Media Marketing” Date:12 july 2023

This research represents an initial exploration into understanding how individuals utilizing the AI media software, developed as part of the Future Web research project, intend to leverage the features designed by programmers. Given the quantitative approach of the study and the diverse geographical origins of the interviewees, it is essential to interpret the results cautiously.

RESEARCH DESIGN

Title of the study: Impact of AI on Organic Social Media Marketing

Statement of problem:

Numerous issues arise concerning the influence of AI on social media marketing, encompassing ethical considerations. With AI becoming increasingly ingrained, ethical concerns emerge, including issues related to data privacy, transparency, and misinformation. The proliferation of deep fake technology, driven by AI, poses a significant problem, presenting challenges for marketers in maintaining a company's brand image ethically. Exploring how AI can establish positive customer relationships, meet their needs, enhance brand loyalty, and its impact on the precision and efficiency of advertising targeting on social media are critical aspects. Understanding how these factors will impact return on advertising spend is also crucial.

Scope of the study:

The paper aims to provide a comprehensive overview of how AI is being utilized in social media marketing on a global scale. This would involve studying the adoption and impact of AI



technologies in various regions and industries. Investigate the extent to which AI-driven content creation is being used and its effectiveness, especially for both established companies.

Exploring the role of AI in personalizing content and targeting specific audiences in social media marketing. Assessing whether AI algorithms are effectively delivering tailored content, recommendations, and advertisements, and their impact on user engagement and ROI.

Gap of the study:

- **Personalization Depth:** Although both papers acknowledge the role of AI in personalization, there is an opportunity to investigate the intricacy and specificity of this personalization. How precise can AI-driven personalization become, and at what point does it cross the threshold into feeling intrusive for consumers?
- **Ethical Considerations:** Neither summary delves deeply into the ethical considerations associated with AI in marketing. There is potential to explore issues related to data privacy, misinformation, and potential biases in strategies driven by AI.
- **Return on Investment (ROI):** While the advantages of AI in marketing are outlined, there is no discussion about the concrete ROI. How does the integration of AI tools correlate with increased sales, customer retention, or other key performance indicators?
- **Integration Hurdles:** As companies integrate AI into their marketing strategies, what challenges do they encounter? This could encompass issues related to training, adapting to new tools, or integrating AI-driven insights with conventional marketing practices.
- **Consumer Perception Evolution:** How do consumers perceive marketing strategies driven by AI? Are they more accepting, indifferent, or resistant to them? Gaining insights into the consumer perspective can provide a fresh perspective.



- **Future Trends:** While the current applications of AI in marketing are emphasized, what upcoming trends or tools should marketers be mindful of? Exploring the imminent landscape can offer valuable insights.

Limitations of the study:

- **Data Accessibility** -Obtaining high-quality data may pose a challenge, especially when dealing with social media data that can be characterized by noise, incompleteness, or a lack of representation of the entire user base.
- **Ethical and Privacy Considerations**-Ethical factors tied to AI, data privacy, and consent may impose constraints on the extent of data collection and analysis.
- **Technological Shifts** -The swift evolution of technology may introduce disruptions in social media platforms, potentially leading to increased traffic and related challenges

SAMPLING METHOD

We adopted stratified random sampling technique to collect and analysis data that influence (AI) artificial Intelligence on organic social media marketing

Stratified Random Sampling:

In order to obtain a sample that accurately represents diverse demographics, we employed stratified sampling by categorizing the population according to variables such as age, gender, and income levels. Within each stratum, respondents were randomly chosen, ensuring that each subgroup was proportionally represented. This method enabled comprehensive analysis across a range of consumer segments.

Sample Size:

We gathered data from a group of 45 respondents, considered adequate for exploratory research and the application of statistical analysis techniques. Despite its modest size, this sample enabled the efficient use of regression analysis, factor analysis, and non-parametric tests to unveil patterns and relationships inherent in the dataset.



DATA ANALYSIS

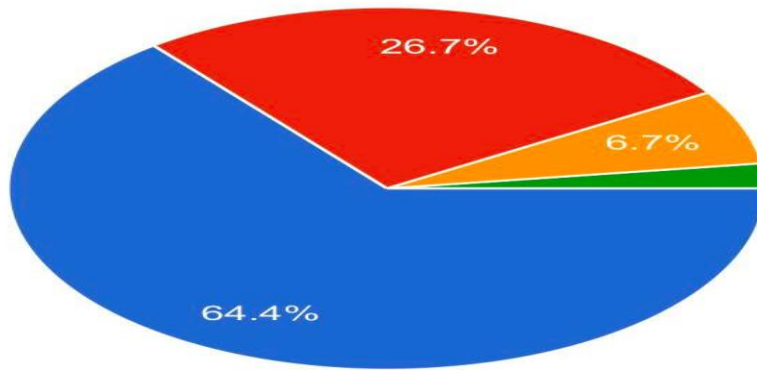
How familiar are you with the concept of AI in social media marketing?	Which social media platforms do you believe have been most impacted by AI in organic marketing strategies?	3. In your opinion, how has AI influenced the effectiveness of organic content on social media?	Have you noticed any changes in user engagement on your social media accounts since implementing AI in your organic marketing efforts?
Very familiar	Instagram	no significant change	decreased engagement
Somewhat familiar	Instagram	slightly reduced	no significant change
Neutral	Instagram	slightly improved	increased engagement
Very familiar	Instagram	significantly improved	decreased engagement
Neutral	Instagram	slightly improved	increased engagement
Very familiar	Instagram	slightly improved	no significant change
Somewhat familiar	Instagram	slightly improved	increased engagement
Somewhat familiar	Instagram	no significant change	no significant change
Very familiar	Instagram	significantly improved	increased engagement
Somewhat familiar	Instagram	slightly improved	no significant change
Very familiar	Instagram	significantly improved	no significant change
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Very familiar	Instagram	significantly improved	increased engagement
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Very familiar	Instagram	significantly improved	increased engagement

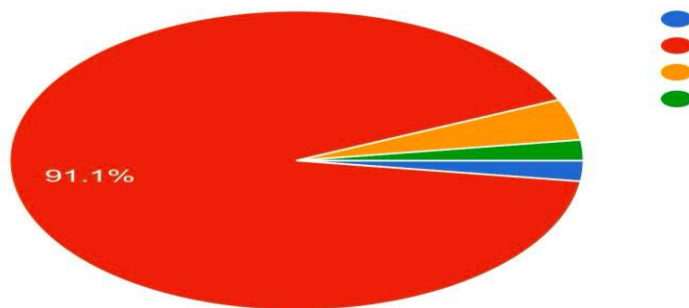
How familiar are you with the concept of AI in social media marketing?

45 responses



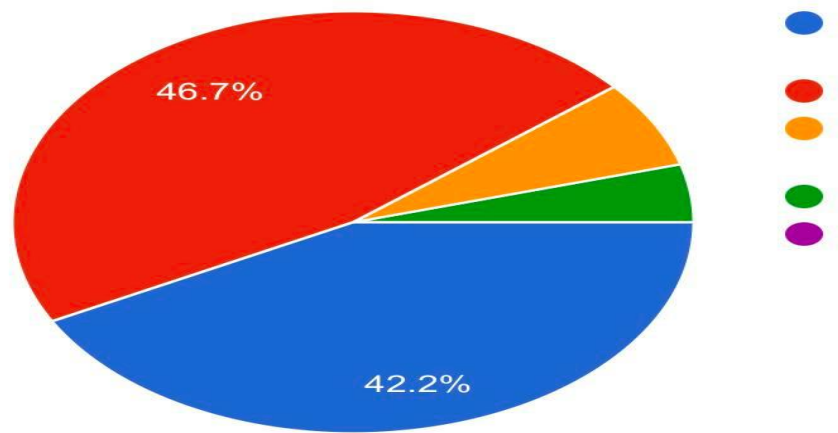
Which social media platforms do you believe have been most impacted by AI in organic marketing strategies?

45 responses



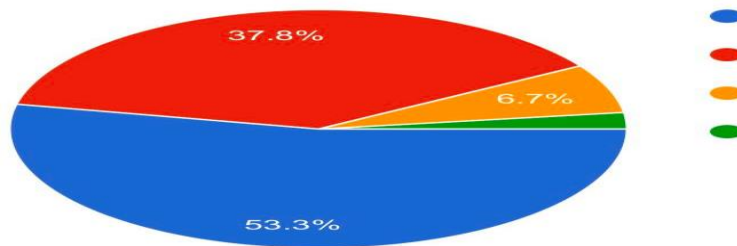
3. In your opinion, how has AI influenced the effectiveness of organic content on social media?

45 responses



Have you noticed any changes in user engagement on your social media accounts since implementing AI in your organic marketing efforts?

45 responses



Summary of Findings

1. How familiar are you with the concept of AI in social media marketing?

- 28 people responded with very familiar
- 6 people responded with somewhat familiar
- 8 people responded with neutral
- 3 people responded with not familiar at all

2. Which social media platforms do you believe have been most impacted by AI in organic marketing strategies?

- 2 people responded with Facebook
- 28 people responded with Instagram
- 8 person responded with twitter
- 7 person responded with twitter
- 0 responded with others

3. In your opinion, how has AI influenced the effectiveness of organic content on social media?



7 people responded with significantly improved
9 people responded with slightly improved
6 people responded with no significant change
15 people responded with slightly reduced
8 people responded with significantly reduced

4. Have you noticed any changes in user engagement on your social media accounts since implementing AI in your organic marketing efforts?

26 people responded with Increase engagement
2 people responded with no significant change
4 people responded with decreased engagement
13 people responded with not applicable

Majority of respondents (15 out of 22) are very familiar with the concept of AI in social media marketing.

6 respondents are somewhat familiar, and only one respondent is neutral.

Most Impacted Platforms: All respondents have mentioned Instagram as the platform impacted by AI in organic marketing strategies.

A significant number of respondents (18 out of 22) have observed increased engagement with the use of AI in their organic marketing efforts.

Improved Content: Most respondents (19 out of 22) mentioned that AI has improved the quality of their organic content.

Increased Engagement: The majority of respondents (16 out of 22) noticed increased engagement on their social media accounts since implementing AI in organic marketing efforts.

There is a strong positive correlation between familiarity with AI in social media marketing and perceiving a significant improvement in engagement.

Instagram is widely recognized as the most impacted platform by AI in organic marketing strategies.



Interpretation:

1. According to the responses most responders have felt that technical difficulties is the most challenging reason for them not being able to implement AI into their organic social media marketing strategy followed by resistance from team members, lack of understanding & lastly budget constraints.
2. Through the responses it could be interpreted that most of the responders felt that AI driven analytics and insights has indeed improved their decision making in the social media marketing strategy but 43% of them felt the opposite.
3. It could be interpreted through the responses that 49% of the responders were very concerned about the ethical indications of using AI in organic social media marketing while 29% of them were somewhat concerned and 22% of them remaining neutral about their opinion on this.
4. It could be interpreted that 68.2% of the responders felt due to AI's contribution to maintaining brand consistency across different social media platforms had improved consistently while 25% of them felt there was no change and the remaining responders feeling there was reduced consistency.
5. Through the responses it could be interpreted that 55.6% of the respondents believed that the use of AI in organic social media marketing had led to a better understanding of audience behavior and preferences while 44.4% of them believed that it had moderately affected it.

FINDINGS AND SUGGESTIONS

From the data collected from the responses here are some findings and suggestions:

1. Instagram appears to be the dominant platform in the dataset, with most responses related to it. Content recommendation algorithms, automated posting schedules, chatbots for customer interaction, and sentiment analysis are frequently mentioned AI-powered features.



2. A mix of responses regarding the impact on engagement, with some reporting improvement and others reporting a reduction or no significant change. Content recommendation algorithms seem to contribute to both improved and decreased engagement.
3. Responses vary, with some reporting significantly improved engagement, while others note decreased or no significant change. Automated posting schedules and content recommendation algorithms are factors influencing engagement changes.
4. Content recommendation algorithms and automated posting schedules are frequently mentioned as valuable AI features. Chatbots for customer interaction and sentiment analysis are also noted, albeit less frequently.

CONCLUSION

The majority of respondents, particularly those who are very familiar with AI in social media marketing, have observed a significant positive impact on their organic marketing efforts on Instagram. This impact is reflected in both increased user engagement and improved content quality. The widespread recognition of Instagram as the most impacted platform by AI indicates the platform's significance in leveraging AI for organic marketing strategies. Overall, the findings suggest that AI plays a crucial role in enhancing the effectiveness of organic content and engagement on social media, particularly on Instagram.

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