

Role of AI in Social Media Marketing – A Study on Enhancement of Customer E Experience

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Abstract:

Recently, AI has emerged alongside Social Media Marketing as a transformative strategy for businesses, providing them with a direct and engaging way to connect with their target audiences to enhance the customer experience. This study explores the role of AI in Social Media Marketing. While traditional marketing methods have supported the various businesses for decades, the rise of social media penetration and digitalization has presented fresh opportunities for all the sectors to build brand awareness, drive customer engagement, and enhance credibility. This study aims to fill the gap in the literature on the of AI in Social Media Marketing for boosting the Customer E Experience. The objective of the study is to understand the significance of AI in social media marketing in enhancing customer e-experience and also to assess the concerns of consumers regarding privacy, intrusiveness, and trust when they interact with AI features in social media marketing. The study employs descriptive statistical tools, such as simple percentages, charts, graphs, frequencies, and one-sample T-tests, to analyze the hypotheses. The study selected 61 respondents and employed a questionnaire as its instrument. The findings highlighted that AI significantly enhances customer e-experience in social media marketing by providing numerous advantages, including chatbots for instant responses, 24/7 availability, personalized experiences, interactive content formats, brand awareness creation, and AI-powered community building. Moreover, personalized interactions and interactive content not only foster deeper connections but also elevate brand awareness and facilitate community building. As marketers continue to embrace these technological advancements, the integration of AI into their social media marketing strategies promises to redefine engagement and loyalty in an increasingly competitive landscape.

Keywords: Artificial Intelligence, Social Media Marketing, Customer E Experience

1. Introduction: Artificial Intelligence

Artificial Intelligence (AI) is a powerful tool that has revolutionized marketing strategies, bringing new dimensions such as Slack bots, better consumer service, and automated marketing. Its inclusion of features like face and voice recognition keeps it at par with other derivatives. AI is now considered the basic necessity in marketing, with ongoing trends in social media marketing including deep learning,

facial recognition, AI-enabled chips, cloud storages, and more personalized privacy policies (Dimitrieska, Stankovska and Efremova, 2018). In today's volatile business environment, digital marketing faces challenges during times of crisis, necessitating effective crisis management to mitigate risks and maintain operational stability. Crisis management involves a series of interconnected assessments and audits to prevent crises that pose serious threats to core products, services, production processes, personnel, environment, and society (Kose and Sert, 2017). Social media marketing has become an indispensable tool for businesses to connect with audiences, enhance brand presence, and drive customer engagement. Platforms like Facebook, Instagram, Twitter, and LinkedIn have opened new avenues for real-time communication, offering businesses a direct way to engage with customers on a global scale. However, as the digital landscape becomes increasingly competitive, companies face the challenge of delivering personalized, relevant, and engaging experiences to their customers (Suciu, George, et al 2019). AI has emerged as a transformative technology, encompassing machine learning, natural language processing, and predictive analytics, that enable businesses to automate processes, gain deep insights from data, and create hyper-personalized marketing strategies. By leveraging AI, brands can anticipate customer needs, deliver tailored content, and enhance their overall social media marketing efforts (Gündüzyeli, Bora.2025). One of the most significant impacts of AI is in the realm of customer e-experience, which refers to the total experience a customer has when interacting with a brand online. As customer expectations grow, AI helps businesses craft more engaging and responsive experiences that resonate with individuals (Froger, Manon, et al., 2019).

Background and Inception of Artificial Intelligence

Artificial Intelligence (AI) was first introduced in 1956 at Dartmouth College and is now an essential aspect of the 4th technological revolution in humanity (Syam and Sharma, 2018, & Schwab, 2016). AI's success is compared to the changes in the oil market and environment 100 years ago (Ng, 2016), and it has a massive and larger effect on businesses ((Syam and Sharma, 2018, & Schwab, 2016). Managers worldwide are investing in AI to develop new market sources, with AI leaders showing good returns (Ransbotham et al., 2018). Bughin et al. (2018) predict an additional \$13 trillion in AI will be generated by 2030, and world GDP will grow by around 1.2% a year. Marketing is one of the industries that can greatly benefit from AI technologies (Fagela, 2019; Kardon, 2019; Ng, 2017), as it can handle large amounts of data and directly connect to revenue growth. A recent survey of 50 brand managers from organizations operating with AI showed the most advantages of machinery training in applications such as search, consumer segmentation, targeting and recommending engines, and business forecasting (Fagella 2019). New technological possibilities and IT businesses in industries result in enhanced customer demand. Research analysts should be able to discuss computer education and other AI techniques, as well as current knowledge on the marketing industry(Bus, Ti and Rt, n.d.). Communications managers familiar with corporate strategies, technology, and analytics are essential for this transformation (Wedel & Kannan, 2016). In a global survey, 79% of CEOs are committed to investing in skills or preparation to improve machine learning marketing productivity(Schrage and Kiron, 2018).

Social Media Marketing – An Overview

Social media has become a significant communication channel in the modern era, facilitating participatory interaction among various stakeholders (Dwivedi, Yogesh K., et al., 2015). Understanding

its role in marketing is crucial for researchers and managers, particularly in customer relationship management, brand management, innovation management, and employee recruitment (Felix, Reto, et al., 2017). Social network analysis studies the social structure of connections and ties between nodes, focusing on electronic word-of-mouth, influencers, and the flow of information through social media (Stephen, Andrew T., 2016). However, there are still gaps in the literature on social network analysis of social media usage. Social media marketing is used across sectors and refers to the utilization of social media technologies, channels, and software to create, communicate, deliver, and exchange offerings that have value for an organization's stakeholders (Dwivedi, Yogesh K., et al. 2015).

Importance of Social Media Marketing:

Social media are online applications, platforms, and media that facilitate interactions, collaborations, and content sharing. They take various forms, including weblogs, social blogs, microblogging, wikis, podcasts, pictures, video, rating, and social bookmarking. As their use increases, businesses and governmental organizations are joining and using them as communication tools. These entities actively use the media for advertising and marketing, partnering with media, events, entertainment, retailers, and digital services (Kim, Angella J., and Eunju Ko., 2012). The passive approach utilizes the social media public domain as a potential source of customer voice, providing marketers with information about market needs, customer experiences, competitive movements, and trends. Social media acts as a bridge in marketing products and services to various organizations and companies worldwide, using mobile phones, Facebook, Twitter, blogs, Google+, LinkedIn, Instagram, and YouTube (Constantinides, Efthymios., 2016). Social media is recognized as one of the most important communication platforms for brand information due to its interactive features enabling participatory, collaborative, and knowledge-sharing activities. Businesses increasingly communicate information about brands through social media activities, including advertising on social networking sites, blogger endorsements, and managing user-generated content, with the aim of building strong and favorable brand knowledge in consumers' minds (Cheung, Man Lai, et al., 2019).

Significance of AI in Social Media Marketing:

Artificial intelligence (AI) is revolutionizing social media marketing by providing valuable insights into consumer behavior and emotions. Tools like predictive analytics, natural language processing, and sentiment analysis help brands tailor their responses more effectively (Gündüzyeli, Bora. 2025). AI-driven sentiment analysis optimizes social media responsiveness by interpreting and reacting to real-time consumer emotions and feedback. AI-driven platforms like IBM Watson NLP and Google AI help businesses predict market trends, detect early shifts in consumer behavior, and optimize customer engagement. During crises, these technologies enhance the speed and accuracy of responses, allowing businesses to manage consumer concerns in real-time. AI also helps brands navigate social media complexities by identifying emerging trends and enabling more personalized, data-driven marketing strategies. The combination of AI and social media presents an opportunity for brands to strengthen their resilience and adaptability during challenging periods. AI is evolving businesses and functions in various industries, offering a competitive advantage by employing AI tools as the use is at boom (Cheung, Man Lai, et al. 2019).

Literature Review:

The study by Beyari and Hashem (2025) investigates the use of artificial intelligence (AI) in personalizing social media marketing strategies and its impact on customer experience, focusing on MENA consumers. The research, based on an online questionnaire, confirms that AI significantly enhances marketing by providing personalized content and real-time consumer interaction.

The study by Omeish, Al Khasawneh, and Khair (2024) investigates the impact of AI technologies on user experience in social media marketing, specifically focusing on augmented reality, virtual influencers, and chatbots in Jordanian Millennials. The research uses Smart PLS 4 and a combination of direct hypothesis testing and mediation analysis to assess these associations.

The study by Daqar and Smoudy (2019) investigates the impact of artificial intelligence (AI) on improving customer experience in Palestine's banks and telecommunications industries. The research used interviews and a structured questionnaire as primary data. The results showed a positive, significant relationship between AI and customer experience, with AI explaining 26.4% of the variance.

This paper by Chen, Y., and Prentice, C. (2025) explores the relationship between artificial intelligence (AI) and customer experience in the service sector. It aims to develop a conceptual framework for AI applications in the customer journey, addressing the lack of research on this topic and providing a clear understanding of how AI influences customer experience.

El Bakkouri, Raki, and Belgnaoui (2022) emphasize the importance of customer experience in today's competitive world. They argue that firms must create strong, enduring experiences using technology to reshape service, customer experiences, and relationship management. The article highlights the role of AI in chatbots in enhancing customer experience, emphasizing the need for businesses to adapt and innovate.

The article by De Bruyn, Arnaud, et al. (2020) explores the potential and challenges of AI in marketing, focusing on knowledge creation and transfer. It highlights the concept of "higher-order learning" and discusses the methodologies and learning paradigms used in AI, including multilayer perceptron, convolutional, and recurrent neural networks.

Shaikh, Aisha, et al. (2025) analyze the use of Artificial Intelligence in social media advertising, focusing on its benefits and risks. They highlight the potential for personalized ads to attract users, but also highlight the potential issues of consumer privacy, algorithmic preferences, and excessive dependency on artificial solutions. The study highlights the need for careful consideration and adaptation in the digital landscape.

The paper by Sarin (2025) delves into the evolution of consumer behavior, highlighting the transformative role of artificial intelligence (AI) in shaping decisions. It discusses how AI technologies like machine learning, predictive analytics, and personalized marketing have revolutionized businesses' understanding and influence of consumer behavior, enhancing information searches, streamlining purchases, and fostering post-purchase engagement.

Significance of the Study:

Social media marketing is increasingly vital for **enhancing customer e-experience** due to technology; it allows businesses to connect authentically with consumers through social media platforms. Social media marketing is a significant strategy for various businesses because it helps build brand awareness, credibility, and customer engagement cost-effectively. It allows the business to tap into AI tools for existing and potential customers and leverage their social media presence to reach new customers and drive conversions.

Scope of the Study:

The study covers the significance of AI in social media marketing on the enhancement of customer e-experience operating in the Shivamogga district.

Objectives of the Study:

The main objective of this study is to examine the role of AI in social media marketing in enhancing customer e-experience. Keeping this goal in view, the following specific objectives have been set for the study.

- To analyse the significance of AI in social media marketing on enhancing customer e-experience.
- To assess the concerns of consumers regarding privacy, intrusiveness, and trust when they interact with AI features in social media marketing.

Hypotheses of the Study:

Hypothesis 01:

HO: There is no significant impact of AI-driven social media marketing on improving customer satisfaction and engagement.

H1: There is a significant impact of AI-driven social media marketing on improving customer satisfaction and engagement.

Hypothesis 02

HO: No difficulties are faced by customers while interacting with AI features in social media marketing.

H1: Difficulties are faced by customers while interacting with AI features in social media marketing.

Methodology:

Primary data has been collected through a well-structured questionnaire and interview with real estate agents. Secondary data has been collected from library records, books, newspapers, journals, magazines, and websites. Secondary data provides a detailed view of the problem statement. The study is descriptive and analytical in nature. For the analysis purpose, simple statistical tools like simple percentages, charts, graphs, frequencies, and one sample T tests are used.

Sampling Method:

A sample of 61 respondents has been selected and analysed. The sampling method used to collect data is convenience sampling. Convenience is a type of non-probability sampling that involves the sample being drawn from the part of the population that is close at hand.

Statistical Tools Used:

SPSS software version 21 is used to analyse the data. To analyse the data, descriptive tools are used, such as simple percentages, charts, graphs, frequencies, and one-sample T tests are used for analysing hypotheses.

Result & Discussion:**Table 01: General Information of Respondents:**

Variables	Characteristics	No. of Respondents	Percentage
Gender	Male	36	59
	Female	25	41
Age Group	20- 30 years	31	50
	31-40 years	15	24
	41- 50 years	14	22
	Above 51 years	01	04
Education	SSLC	01	04
	PUC	08	13
	Graduation	42	68
	Post Graduation	10	15
Occupation	Student	42	68
	Private sector employee	08	14
	Public sector employee	02	03
	Farmer	01	01
	Self employed	08	14

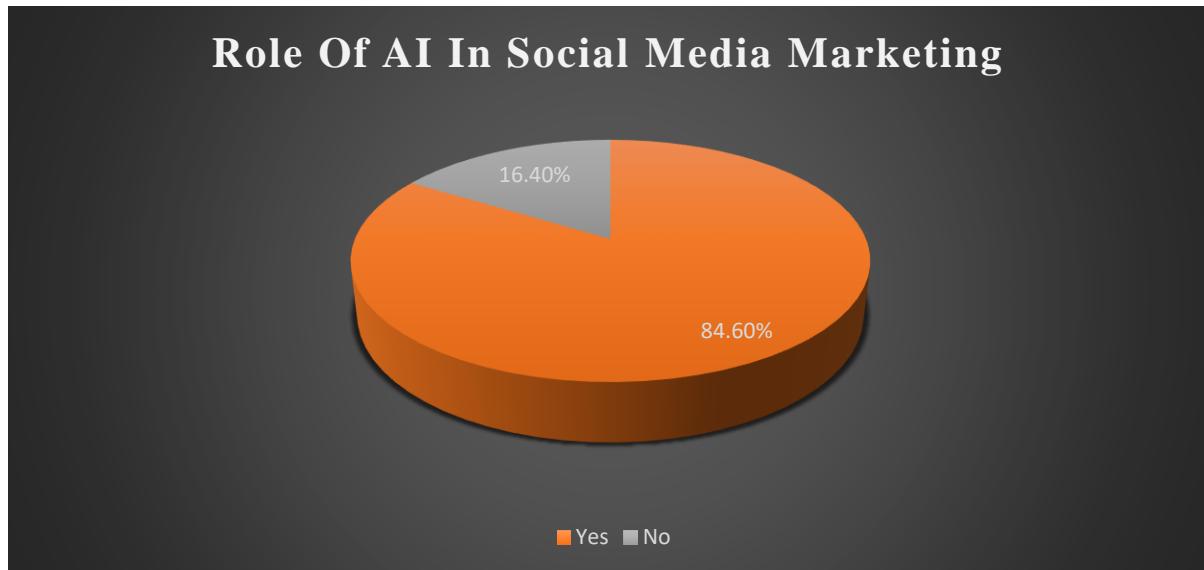
Monthly income	Below 10000	08	14
	10,001-20000	09	15
	20001-30000	12	19
	Above 30000	32	52

Source: The data collected from the field survey

Table 02: Do you agree that AI is playing a prominent role in social media marketing in enhancing customer e-experience?

Role Of AI In Social Media Marketing	Response	No. Of Respondents	Percentage
Yes	51	84.60%	
No	10	16.40%	

Source: The data collected from the field survey



Source: The data collected from the field survey

Hypothesis 01:

HO: There is no significant impact of AI-driven social media marketing on improving customer satisfaction and engagement.

H1: There is a significant impact of AI-driven social media marketing on improving customer satisfaction and engagement.

One-Sample Statistics

Factors	N	Mean	Std. Deviation	Std. Error Mean
Personalized Experiences	61	3.8361	.89778	.11495
Chatbots for instant responses	61	3.9180	.73700	.09436
Automated support and issue resolution	61	3.9508	.66899	.08565
24/7 availability	61	3.6885	.82747	.10595
Social listening and sentiment analysis	61	3.8361	.82017	.10501
Predictive analytics	61	3.8525	.79238	.10145
Content optimization	61	3.7049	.78197	.10012
Personalized content recommendations	61	3.9016	.78962	.10110
Creating Brand Awareness	61	3.8361	.82017	.10501
Interactive content formats	61	3.8525	.79238	.10145
AI-powered community building	61	3.9016	.83076	.10637

Source: The data collected from the field survey

One-Sample Test

Factors	Test Value = 0						
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference		
					Lower	Upper	
Personalized Experiences	33.372	60	.000	3.83607	3.6061	4.0660	
Chatbots for instant responses	41.521	60	.000	3.91803	3.7293	4.1068	
Automated support and issue resolution	46.125	60	.000	3.95082	3.7795	4.1222	
24/7 availability	34.815	60	.000	3.68852	3.4766	3.9004	
Social listening and sentiment analysis	36.530	60	.000	3.83607	3.6260	4.0461	
Predictive analytics	37.972	60	.000	3.85246	3.6495	4.0554	
Content optimization	37.004	60	.000	3.70492	3.5046	3.9052	

Personalized content recommendations	38.592	60	.000	3.90164	3.6994	4.1039
Creating Brand Awareness	36.530	60	.000	3.83607	3.6260	4.0461
Interactive content formats	37.972	60	.000	3.85246	3.6495	4.0554
AI-powered community building	36.681	60	.000	3.90164	3.6889	4.1144

Source: The data collected from the field survey

Interpretation:

From the above table, it is found that all the factors listed in the above table are found to be significant and are less than .05. Therefore, we observe the impact of AI-driven social media marketing on improving customer satisfaction and engagement. The alternative hypothesis is thus accepted, and the null hypothesis is rejected. This suggests that implementing AI strategies in social media marketing enhances customer interactions and leads to a higher level of satisfaction among users. Consequently, businesses may benefit from investing in AI technologies to optimize their marketing efforts and foster stronger relationships with their customers.

Hypothesis 02

HO: No difficulties are faced by customers while interacting with AI features in social media marketing.

H1: Difficulties are faced by customers while interacting with AI features in social media marketing.

One-Sample Statistics

Factors	N	Mean	Std. Deviation	Std. Error Mean
Intrusiveness	61	4.0000	.89443	.11452
Algorithm Aversion	61	3.9508	.80470	.10303
Lack of trustworthy	61	3.8033	.72617	.09298
Artificial Perception	61	3.8033	.85283	.10919
Data Privacy and Security	61	3.9508	.80470	.10303
Unfair Or Discriminatory Outcomes	61	3.8033	.74877	.09587
Lack of Human Touch	61	3.9672	.83601	.10704
Overcoming Customer Trust Issues	61	3.8525	.67912	.08695
Transparency, Fairness, And Accountability	61	3.7377	.77248	.09891
Lack of Empathy	61	3.8033	.74877	.09587

One-Sample Statistics

Factors	N	Mean	Std. Deviation	Std. Error Mean
Intrusiveness	61	4.0000	.89443	.11452
Algorithm Aversion	61	3.9508	.80470	.10303
Lack of trustworthy	61	3.8033	.72617	.09298
Artificial Perception	61	3.8033	.85283	.10919
Data Privacy and Security	61	3.9508	.80470	.10303
Unfair Or Discriminatory Outcomes	61	3.8033	.74877	.09587
Lack of Human Touch	61	3.9672	.83601	.10704
Overcoming Customer Trust Issues	61	3.8525	.67912	.08695
Transparency, Fairness, And Accountability	61	3.7377	.77248	.09891
Lack of Empathy	61	3.8033	.74877	.09587
Data Quality	61	3.7213	.75567	.09675

Source: The data collected from the field survey

One-Sample Test

Factors	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Intrusiveness	34.928	60	.000	4.00000	3.7709	4.2291
Algorithm Aversion	38.346	60	.000	3.95082	3.7447	4.1569
Lack of trustworthy	40.906	60	.000	3.80328	3.6173	3.9893
Artificial Perception	34.830	60	.000	3.80328	3.5849	4.0217
Data Privacy and Security	38.346	60	.000	3.95082	3.7447	4.1569
Unfair Or Discriminatory Outcomes	39.671	60	.000	3.80328	3.6115	3.9950
Lack of Human Touch	37.063	60	.000	3.96721	3.7531	4.1813
Overcoming Customer Trust Issues	44.305	60	.000	3.85246	3.6785	4.0264
Transparency, Fairness, And Accountability	37.791	60	.000	3.73770	3.5399	3.9355
Lack of Empathy	39.671	60	.000	3.80328	3.6115	3.9950
Data Quality	38.462	60	.000	3.72131	3.5278	3.9148

Source: The data collected from the field survey

Interpretation:

The above table shows that all factors are significant and less than .05. Hence, it is observed that difficulties are faced by customers while interacting with AI features in social media marketing because of a lack of Empathy, a lack of human touch, overcoming customer trust issues, etc., to promote an enhanced customer e-experience. Consequently, we accept the alternative hypothesis and reject the null hypothesis. This finding highlights the importance of integrating more human-like elements into AI systems to foster better customer relationships. By addressing these challenges, companies can improve user satisfaction and loyalty in their marketing strategies.

Findings:

1. The majority, i.e., 59% of respondents, are male and involved in using AI in social media marketing, slightly outnumbering the females, who constitute the remaining 41%.
2. The majority, i.e., 68% of respondents, are students; 14% of respondents are private sector employees and self-employed, also using AI in social media marketing, respectively; and the remaining 3% and 1% of respondents are public sector employees and farmer, respectively.
3. The majority, i.e., 84.60% of respondents, have agreed that AI is playing a prominent role in social media marketing in enhancing customer e-experience.
4. Among the various factors, AI significantly enhances customer e-experience in social media marketing by providing numerous advantages, including chatbots for instant responses, 24/7 availability, personalized experiences, interactive content formats, brand awareness creation, and AI-powered community building.
5. In this study, the majority of respondents agreed that difficulties are faced by customers while interacting with AI features in social media marketing, such as intrusiveness, lack of human touch, data privacy and security, overcoming customer trust issues, a lack of empathy, transparency, fairness, and accountability, etc.
6. The majority of respondents agreed that AI plays a crucial role in social media marketing by creating an overall customer e-experience.

Suggestion:

Analysis, interpretation, and findings revealed the role of AI in social media marketing for enhancement of customers e-experience and AI transparency on consumer trust, authenticity, emotional responsiveness, privacy perception, sentiment analysis, content discovery, recommendation accuracy, and user-generated content (UGC) on brand engagement and conversion rates. Hence, it is suggested that Transparency is essential for trust in marketing AI, and a controlled messaging experiment could help determine the optimal thresholds for trust. Generative AI-generated content can boost engagement but may reduce perceived authenticity and content quality. A study comparing user trust and engagement when AI-generated content is explicitly disclosed could reveal the thresholds that maximize confidence. Compared to standard bots, companies could implement empathetic chatbots to identify sentiment and assess satisfaction and loyalty. Privacy perception versus personalization should be investigated, with

targeted ads indicating data signals and measuring perceived invasion and brand favorability. Sentiment analysis can help brands detect pain points and manage public relations swiftly during crises. Logging user interactions with AI-driven recommendations can help establish best practices for AI-powered social listening during brand emergencies.

Conclusion:

AI plays a prominent role in social media marketing to create enhancements to customer e-experience in all sectors. AI is revolutionizing customer service by enabling hyper-targeted messaging and real-time content optimization. The technology enhances customer satisfaction and loyalty by positioning brands closer to consumers' individual needs. AI-powered chatbots and virtual assistants provide 24/7, empathetic customer service, reducing wait times and increasing perceived brand attentiveness. Tone-aware bots enrich emotional quality, raising consumer trust and satisfaction. AI also provides real-time insights, enabling proactive campaign adjustments and crisis mitigation. Automation of content creation and campaign management allows teams to focus on strategy. AI-assisted social media marketing boosts volume and creativity. Ethical AI deployment, transparency about AI involvement, and responsible data practices are essential for sustaining consumer trust. However, Gen Z has mixed attitudes toward fully AI-driven influencers.

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