

Artificial Intelligence in Marketing Applications

OPEN ACCESS

Volume: 3

Issue: Special issue 2

Month: December

Year: 2024

ISSN: 2583-7117

Citation:

Ms. Varsha, Bala Pratap Singh and Bhawna Saxena "Artificial Intelligence in Marketing Applications" International Journal of Innovations In Science Engineering And Management, vol. 3, no. Special Issue 2, 2024, pp. 113-117.

DOI:

10.69968/ijisem.2024v3si2113-117



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Abstract

Artificial intelligence (AI) has changed the field of marketing, allowing businesses to improve their strategies, connect with customers more effectively, and boost growth. This study examines how AI is used in marketing, with a focus on its impact on personalized marketing and customer relationships management (CRM). The study also examines how companies use AI to handle customer data and increase revenue. The research examines the ethical issues and challenges of using AI, such as concerns about data privacy and the need for transparency. The findings show that AI makes marketing better and gives customers more personalized experiences. This study contributes to the growing knowledge about AI in marketing by providing information about its applications, challenges, and future directions.

Keyword: Artificial Intelligence, Personalized Marketing, Customer Relationships Management (CRM).

INTRODUCTION

Artificial intelligence (AI) is a subfield of computer science it concerned with building machines or systems that can carry out operations that normally call for human intelligence. Learning, thinking, problem-solving, perception, comprehending natural language, and even engaging with the real environment are some examples of artificial intelligence tasks. Artificial intelligence categorized into two types narrow AI and general AI. Narrow AI is a kind of AI is made to do a specific job, such internet searches, face recognition, or self-driving cars. Narrow artificial intelligence systems are extremely specialized and bound by a small number of restrictions. This is the case for the majority of AI now in use and general AI is a kind of AI is capable of carrying out any intellectual work that a human can. Though this degree of AI is not yet available, general AI would have consciousness and comprehension across a wide range of tasks. Because AI can automate processes, analyze massive databases, and facilitate new types of human-computer connection, it is revolutionizing a number of industries. It can be used in banking, entertainment, transportation, healthcare, and other fields. The use of AI in marketing started in the 1990s and early 2000s, but thanks to developments in big data, machine learning, and computer power, it has picked up tremendous speed in the past ten years. The early application of AI in marketing was data analysis and customer relationship management. Businesses started analyzing and forecasting customer behaviour with AI-powered customer relationship management (CRM) solutions. Personalization Based on client categories, marketers began tailoring emails and recommendations using rudimentary AI algorithms. This marked the start of more specialized marketing campaigns. after the rise of digital marketing search engines gained popularity, artificial intelligence (AI) began to play a significant role in marketing by determining search rankings and ad placements using algorithms. AdWords (now

Google Ads), powered by AI from Google, have grown to be a vital tool for marketers. AI-powered recommendation engines are being used by e-commerce giants such as Amazon to make product recommendations to users based on their past browsing and purchasing activity. Sales and engagement went up as a result. AI started to transform advertising with programmatic ad buying, in which digital advertising space is automatically purchased in real-time by algorithms that target particular audiences more effectively than manual procedures, after 2010 AI is being integrated into platforms such as HubSpot, Marketo, and Salesforce to automate repetitive processes like social media postings, email campaigns, and customer segmentation. Thanks to these tools, marketers could now concentrate more on strategy than on execution. AI powered chatbots gained traction in marketing and customers support they enhance user experience and engagement by responding to customer's inquiries immediately. With the use of AI to predictive analytics, marketers are now able to more accurately foresee trends, optimize campaigns, and manage funds.

Mrs. K. Nalini, Dr. P.Radhakrishnan, G. Yogi, S. Santhiya, V. Harivardhini (2021)in this study the researcher explain the application of artificial intelligence will undoubtedly bring about a change in the way that business has traditionally been conducted. The potential to complete tasks more quickly and accurately is charge by artificial intelligence.They also discuss that AI significantly benefits the banking and financial sectors in terms of cost-effectiveness, large-scale computation, data management, and information retrieval. They explain that marketing professionals may make data-driven decisions for improved campaign outcomes with the use of artificial intelligence. Additionally, markers can quickly identify new clients and their purchasing patterns by utilizing AI's prediction efficiency, which will increase sales and satisfy customers.

P.S. Venkateswaran, M. Lishmah Dominic, Shashank Agarwal, Himani Oberai, Ila Mehrotra Anand, Suman Rajest(2024).The purpose of this study is to find out how marketing and brand loyalty can be enhanced through the use of artificial intelligence (AI). One of the most innovative technological advancements is artificial intelligence (AI), which enables computers to autonomously perform mental functions like reasoning and problem-solving that are often only performed by humans. To make decisions in real time (e.g., about which marketing actions to take), machines represent, learn, store, and enhance their knowledge gradually based on existing information and historical

experiences (e.g., forecasting consumer pleasure). They explain that how Artificial intelligence (AI) is changing businesses approach and improve their customer loyalty initiatives because of its capacity to analyze large datasets, forecast customer behaviour, and provide tailored experiences.This investigation explores the complex ways that artificial intelligence (AI) is transforming the field of customer loyalty, illuminating its uses, advantages, and revolutionary potential to push AI to the forefront of contemporary marketing.

Dr. Sajan M. Georgel, Dr. B. Sasikala, Gowthami T, Dr. P. Sopna, Dr. M. Umamaheswari, Dr. D. Paul Dhinakaran (2024)This research has a variety of goals, with the main one being to offer a thorough grasp of how AI, marketing tactics, and overall performance interact. Researchers analyze the present effects of AI on customer engagement, marketing strategy, and overall performance indicators.Examine the difficulties and roadblocks that arise when integrating AI into marketing campaigns and offer solutions.

Kwabena Abrokwha Larbi, Yaw Awuku Larbi(2024) From the resource-based view (RBV) standpoint, this study attempts to experimentally analyze the relationship between artificial intelligence (AI) in marketing (AIM) and business performance.Researchers found that according to the data analysis, AIM significantly affects the financial performance, customer satisfaction, internal business process performance, and learning and growth performance of small and medium-sized enterprises in Ghana. Through the application of AIM determinants such as the Internet of Things (IoT), collaborative decision-making systems (CDMS), virtual and augmented reality (VAR), and personalization, this study establishes the significance of the AIM approach in achieving financial performance, customer performance, internal business process performance, and learning and growth performance.

Roopal Gangwar, Bidya Dash, Amitabh Nanda, Sheenam Ayyub. (2024). the purpose of this study is to determine the factors that determine the impact of artificial intelligence (AI) enabled management information systems (MIS) on managerial decision making, this study survey comprising 213 individuals from various business organizations was conducted. The results of this study showed that risk management, automation of routine tasks, predictive analytics, and data processing and analysis are the factors that determine the impact of AI-enabled MIS on managerial decision making.

OBJECTIVE OF THE STUDY

The objective of this study is to analyze the role of AI in marketing applications and study the impact of AI on businesses operation, investigate how AI helps manage customer's data and boost revenue. This study also discusses the practical challenges and future implication of AI in marketing.

RESEARCH METHODOLOGY

The secondary data used in the study was gathered from a variety of sources, including research papers, articles, research reports, and so on.

ARTIFICIAL INTELLIGENCE IN MARKETING APPLICATIONS

Businesses can now engage with customers more effectively, optimize their strategies, and encourage growth in ways that were previously unthinkable with the use of artificial intelligence in marketing. Marketing is becoming more effective and efficient with the help of artificial intelligence it help to increased capacity to use data, forecast results, and automate procedures.

Personalization of Marketing With the use of AI, marketers can target particular segments with customized messages by creating comprehensive customer profiles from vast volumes of data analysis. AI increases engagement and conversion rates by tailoring content to specific users based on their past interactions, behaviour, and preferences. Sales representatives can increase the personalized experience as a key selling point and take advantage of a huge sales opportunity. The strategy can be implemented in-person, online, through social media, and through all other means.

Process Automation Chatbots driven by AI answer consumer questions, offer assistance, and lead customers through the checkout process in real time. AI saves time and ensures consistency by creating material such as emails, social media posts, and product descriptions. It helps to speed up response times and free up staff members' time for difficult assignments. AI makes shopping more intuitive by allowing consumers to upload photographs or search for products using voice commands. It makes it possible to produce creative materials like movies, photos, and ad content more quickly and with greater experimentation which boosts sales and consumer happiness

Data Analysis and Customer Relationship Management

By using the natural language processing and machine language AI in CRM can organize, short and analysis the data in a meaningful way that helps to execute plan based on the data being collected. The best contribution of AI to CRM is predictive analytics. Artificial intelligence CRM have enhanced the data analysis capabilities that tracks social media and other platforms to determine how the customers feels about a product or brand, it analyze and monitors consumer historical data and customers behaviour through algorithms and recommend product and services based on that customers need. Artificial Intelligence also analyzes the interactions of customers across many channels, offering information into their involvement and pinpointing opportunities for enhancement. It also aids in trend analysis, customer feedback understanding, brand mention monitoring, and social media conversation analysis. This help to make better relationship with customers and identify necessary changes to the sales process.

Opportunity Identification and Idea Generation to Increase Revenue

AI makes proactive marketing activities possible by forecasting future customer behavior, such as chance of purchase or risk of churn. Artificial intelligence (AI) models forecast future sales by analyzing past sales data and market patterns, which aids in identifying opportunities and better business planning. AI constantly tracks marketing initiatives and instantly optimizes them to get the best return on investment (ROI). Artificial Intelligence (AI) facilitates the new idea generation, planning and execution of marketing initiatives by forecasting results, streamlining budgets, and guaranteeing resource allocation. Complex data sets are processed and analyzed by AI, which produces insights that help marketers make more informed decisions. It will also enable you to make decisions in real time by offering profound insights into consumer behaviour from massive data sets. By focusing in on a smaller target group and raising conversion rates, it improves return on investment.

CHALLENGES TO THE USE OF AI IN MARKETING

The marketing industry has completely changed as a result of artificial intelligence, which gives companies previously unheard-of insights into the preferences and behaviour of their target audience. But as AI gets more and more entwined with marketing tactics, the ethical dilemma becomes more urgent. Therefore, it's critical to comprehend

the obstacles preventing AI from being widely used in marketing.

Investment Cost and Return: Investing in technology, infrastructure, and manpower is necessary for implementing AI in marketing. Prior to launching AI projects, businesses should thoroughly assess the financial implications, including ROI. Furthermore, assessing the influence and efficacy of AI-based marketing can be challenging, but it's crucial to do so in order to improve tactics and support financial commitments. The other major obstacle that businesses face, particularly Small and Medium-Sized Enterprises, additional subscription cost in order to gain access to various AI applications.

Use AI for immoral purposes: Just as businesses may use AI for unethical goals in marketing, politicians frequently employ manipulative techniques and messaging in their campaigns. During political campaigns, some candidates inflate or falsify data and information in an effort to win support. By appealing to people's fears and biases, these politicians want to divide the public and present themselves as the sole fix for alleged issues. This tactic is comparable to how artificial intelligence algorithms might take advantage of consumer weaknesses and preferences to sway purchase decisions. Politicians can use AI to construct their propaganda to appeal to voters' innermost fears and prejudices, while businesses can use it to target individuals with personalized marketing messages that play on their impulses or vulnerabilities. When AI systems use biased data, bias may unintentionally be introduced. The company's reputation may suffer and biased outcomes may arise from this. Businesses utilizing AI must make sure all methods are fair and transparent, that they adhere to ethical standards.

Data quality and privacy concerns: For precise insights, artificial intelligence needs high-quality data. Nonetheless, businesses must overcome obstacles to guarantee data dependability, accuracy, and completeness. Data protection is a significant issue as well because, in order to keep customers' trust, personal data processing and gathering must adhere to applicable laws.

Absence of Skilled staff: Using AI in marketing effectively necessitates a staff with the necessary skills to handle AI tools and procedures. It is necessary to improve and teach current employees so they can use AI-based strategies, comprehend the potential of AI, and decipher insights produced by AI.

Implementation Complexities: It might be difficult and time-consuming to integrate AI systems into current marketing infrastructure. Careful planning and coordination between various departments and systems within a company are necessary to ensure interoperability, data integration, and system scalability.

Lack of Human Interaction: In spite of the fact that AI empowers personalized experiences, but it can in some special cases there is need the human interaction. Some of the clients still lean and look toward association with human operators for complex issues or enthusiastic back support, so it is really importance to make the correct adjust and balance between automation and human interaction.

EMERGING AND FUTURE TRENDS FOR AI IN MARKETING

AI in marketing has novel trends such as augmented reality/ virtual reality, technology support in marketing advanced SEO techniques, influencer network analysis and automated content creation.

AR/VR Technology is enhancing customer's experience. Through this technique customers can walk through the virtual stores buy product from virtual shelves. This provides higher customers engagement, high conversation rate and support in marketing advanced.

Search Engine Optimization (SEO) Advance SOE techniques like predictive SEO, voice search optimization, AI driven keyword optimization and algorithm based content auditing are the latest approaches in marketing. These techniques are very rapidly shaping the digital marketing which provide significant and effective search engine to their customers.

Influencers Network Analysis is a new trend used by AI in marketing to examine large data sets and identify the valuable potential influencers on the basis of followers interaction rate, engagement quality and content relevance. By using this data, businesses may connect with the influencers who best fit their brands and target market.

Automated Content Creation is advanced algorithm and machine learning where AI is content creator; generate blogs post and social media updates. By utilizing the structured data AI system produce unique content and match them with the target audience. Automated content creation is a time saver and provide insight about the customers' preferences. Combination of artificial intelligence and marketing transformed the business

landscape and provide significant advancement. AI in marketing is the significance of

Automation, popular tools like automated email marketing, chatbots for customers queries, and predictive analytics for customer behaviour are used by the businesses. Now a day's

Mobile Marketing is another concept which is very popular because expert predicted a notable shift towards the mobile marketing. AI provides better customers experience on the mobile platform.

AI and Block Chain Integration is also a powerful tool for marketers which provide more transparent and accountable marketing strategies. Combination of block chain and AI enhanced the customers trust, and data privacy. With all of these forecasts, artificial intelligence (AI) in marketing paints a picture of the future and keeps pushing the envelope of what is feasible, opening the door to an infinitely promising future.

CONCLUSION

AI in marketing has completely changed how companies interact with their customers, improve their business approaches, and encourage the expansion. By the help of AI-powered tools and strategies more individualized, effective, and data-driven marketing strategies have been made possible for the businesses, which let businesses customize their messaging according to the taste and actions of the each customer's. AI can automate operations, segment customers on the bases of the need and other demographic factors, and forecast trends through advanced analytics, improving customer experiences and increasing return on investment. But there are some drawbacks also to using AI in marketing as well. These include data protection, potential biases in AI algorithms, and the requirement for ongoing human monitoring. To ensure appropriate and efficient use of AI in marketing, marketers need to focuses on the advantages of AI against these difficulties. In conclusion, artificial intelligence (AI) has a lot to offer in terms of improving marketing initiatives, its effective application necessitates a careful strategy that takes into account both the advantages and the difficulties. AI will probably play an important role in marketing as technology develops, so companies will need to be aware of the latest developments and workable in order to stay ahead of the competition.

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