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The Role of Artificial Intelligence to Predicting Customer Behavior in Social Media Marketing: A Review

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Abstract

Social media is the greatest tool to analyze customers' sentiments regarding goods and services. Sentiment analysis uses text analysis techniques to decipher customers' emotions (positive, negative, and neutral) towards specific goods and services. Artificial intelligence will be able to better anticipate customer needs because the data set it's relying on is so vast. Social Media Marketing campaigns will be more successful because of this. Human error will be more of a thing of the past as Artificial intelligence continues to evolve and the strategic decisions we make as marketers will be better informed.

Keywords: Artificial Intelligence, Social media marketing, Customer behaviour

Introduction

Predictive analytics, an actual application of ML, empowers marketers to forecast customer behavior and optimize marketing strategies accordingly. By analyzing historical data, ML algorithms can predict future outcomes, such as customer churn, purchase propensity, and lifetime value. These insights enable businesses to develop personalized marketing campaigns, tailor product offerings, and allocate resources effectively. ML algorithms also facilitate customer segmentation, automatically grouping customers based on shared characteristics, enabling marketers to deliver target messages and offers.

Predicting customer behaviors like the likelihood of a user making a purchase or the potential churn rate based on their online activities and engagement patterns. Any product or service, no matter how good it is in terms of quality, if not aligned with the customer's needs and desires, is a fiasco. Not only geographic location, but also culture, religion, nationality, and environment influence customer behavior. AI tools mine data from social media and news to past sales and reviews to tell what the customers are expecting or on which goods they are ready to spend the extra bucks. These tools also account for the economic conditions and spending power of the customers. The best thing about these tools is that they are dependable as it is proven that they predict the future demand and supply with the highest accuracy level. The companies can capitalize on these valuable insights to offer personalized goods and services to the targeted regions.

Review of Literature

Smitarani Satpathy (2021) ^[1] Role of Artificial Intelligence in Social Media and Human Behaviour. The paper contains the simple idea of Artificial Intelligence on social media and human behaviour. The major concern of this paper is to show the changing behaviour of human being and Artificial Intelligence usefulness in human life as well as social media. Social media popularity came into high during the last decade due to smart technologies used in mobile and internet. In last 10 years research on AI shows its impact on human life as well as in media marketing.

Anand Vardhan (2022) ^[2] Role of Artificial intelligence in social media marketing. Artificial intelligence refers to any human-like intelligence exhibited by a computer, robot, or any other machine. This paper discusses the significance of AI in social media marketing. The paper outlines a framework for understanding how artificial intelligence impacts the marketing scenario on social media sites. This study investigates the implementation of AI in marketing, and the pros and cons associated with the use of AI-powered tools in marketing. Through secondary research, the paper finds out how companies reap the benefits of early adoption of AI in their businesses, and concludes that AI has become inevitable for a marketer who wants to enjoy a competitive edge over the others. It therefore advises businesses to welcome AI technology, and in particular, urges marketing managers to make AI training mandatory for their marketing teams.

Robinson (2023) ^[3] A Study on Artificial Intelligence in Marketing Mix-Conceptual Frame Work. Artificial intelligence (AI) in marketing is an emerging trend that can improve both the customer experience and the effectiveness of marketing campaigns. AI is a key part of the fourth industrial revolution. Today, the majority of marketers have started using AI to collect and utilize customer information. This paper focuses on literature reviews regarding the awareness and application of Artificial Intelligence (AI) in the marketing mix, specifically investigating the efforts of the marketing mix 4Ps (product, price, promotion, and place).

Sepideh (2023) ^[4] the Role of AI in Digital Marketing- A Review. The purpose of the current study paper is to provide a review of earlier studies that have examined the crucial role of artificial intelligence (AI) in digital marketing. AI has become a potent instrument that has the potential to revolutionise several industries, including marketing. By enabling companies to analyse massive volumes of data, identify patterns, and take informed decisions, artificial intelligence has completely changed how businesses engage with their customers online. The paper discussed how AI technologies transform various aspects of digital marketing, enabling businesses to enhance customer experiences, optimize advertising campaigns, and improve overall marketing effectiveness.

Rohit Bansal (2023) ^[5] Promoting Customer Engagement through Artificial Intelligence -A Systematic Literature Review. The study aims to examine the present state of research related to artificial intelligence in customer engagement. The review is based on 20 articles published during 2019-2022 from the various databases. It follows a systematic approach for reviewing AI in CE literature and presents research contexts, antecedents, consequences, moderators, mediators and AI uses to engage customers.

Indent of the Study

To study the role of Artificial intelligence to predicting customer behavior in social media marketing

Predicting Customer Behaviour

Social media is the greatest tool to analyze customers' sentiments regarding goods and services. Sentiment analysis uses text analysis techniques to decipher customers' emotions (positive, negative, and neutral) towards specific goods and services. For example, AI tools can analyze 10,000+ online reviews about your product to help you determine if customers are happy with the quality and price

of your product or not. Interpreting people's emotions is essential for the success of the business. No business can survive without learning from unhappy customers. As the founder of Microsoft Bill Gates said, "Your most unhappy customers are your greatest source of learning". Customers not only post reviews but discuss each aspect of the products and services, from quality to price and customer service, on social media. AI tools can analyze this content from social media to divulge customers' sentiments about your goods and services. Besides this, these tools also help to determine the customer's expectations from the business. Based on these actionable insights' businesses can take imperative decisions to improve their quality, affordability, and customer service in the future.



Fig 1: Consumer behavior

Deep learning has "the potential to find patterns inside of patterns" in data to help businesses understand what customers really want, says digital marketing expert Reshu Rathi, in an article about the technology's role in marketing automation. She explains that deep learning opens the door to hyper-personalization of marketing messages and the customer experience because it takes a customer's intent into account, and not just their transactional or interaction history. For example, researchers with Renmin University of China found that information about consumers' hobbies and work situations, when used as inputs for a deep learning method, can help predict the automobile purchase intent and preferences of different groups of consumers.

It's doubtful that AI will replace actual human support entirely, but it can be relied on to cover all those repeated mundane requests. The FAQ section of your website or interactive chat bots can be automated to answer the most popularly asked questions about your products and divert that traffic away from your customer support centers. This would allow your customer support to concentrate on the more complicated questions that require more time or resources. You're now "killing two birds with one stone" while providing excellent support for your customers.

Most marketing-oriented analytics tools only look backward at what happened in the past. It's much more productive to use data to foresee what will happen in the future. Some companies have in-house data science teams that can build predictive models, but most marketers don't have access to effective advanced analytics and predictive modeling.

AI has vast potential as a partner for marketers in a variety of areas. Generative AI can help drive content creation. Natural language processing can interpret online interactions.

Conversational AI can address customer inquiries and offer recommendations. And, of course, AI-powered predictive analytics can provide deeper insights into audience and customer behavior; provide guidance for more personalized outreach to specific audiences and customer segments; and assist in evaluating marketing messages, campaigns, and channels.

While our tools for accomplishing these tasks will only get better, it's important to remember that human marketers will always have to provide creative energy and expert guidance for AI. Ideally, this will reduce the tedious tasks marketers enjoy less and let them focus on the strategy and creativity that fuel their success.

Findings and Conclusions

Artificial intelligence has a multitude of capabilities. It can assist marketers to be more efficient by streamlining processes like content creation, campaign design, segmentation, etc. Because the information it relies on is constantly changing and evolving, Artificial intelligence itself is able to adapt dynamically so the content it is creating is based on the most up to date trends and data.

Artificial intelligence could make marketers job much easier, particularly with the development of deep learning. As technology and Artificial intelligence evolves so must marketers and the strategies they execute. It is the automating processes to allow marketers to make smarter decisions faster. Artificial intelligence will be able to better anticipate customer needs because the data set it's relying on is so vast. Social Media Marketing campaigns will be more successful because of this. Human error will be more of a thing of the past as Artificial intelligence continues to evolve and the strategic decisions we make as marketers will be better informed.

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