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An Analysis of Artificial Intelligence Adoption in Marketing Industry

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ABSTRACT: Artificial Intelligence (AI) in marketing has revolutionised customer engagement, data analysis, and campaign optimisation for firms. The main trends, advantages, difficulties, and potential applications of AI in marketing are examined in this analysis.

AI has made it possible for marketers to use automation, machine learning, and sophisticated data analytics to develop more individualised and effective marketing campaigns. As a result, marketing operations have become more efficient and better at targeting customers. Artificial intelligence (AI)-driven solutions that are changing consumer interactions and increasing engagement and conversion rates include chatbots, recommendation engines, and predictive analytics.
The use of AI in marketing has obstacles in addition to possible advantages. These include the requirement for a high level of technological competence, ethical issues, and data privacy issues. The quick development of AI also begs concerns about how it will affect jobs and the marketing industry as a whole.

I. INTRODUCTION

In the long run, artificial intelligence (AI) will be a crucial component of all businesses worldwide. Significant shifts in the AI ecosystem are reflected in the latest developments in AI-driven automation. It is apparent in the reorganized concepts, pursuits, and financial commitments made by the company to the field of AI adoption. With its ability to recognize faces and objects, this technology is quite advanced and has a wide range of business applications. While object detection can be used to separate and analyze photos, facial recognition can be utilized for security purposes to distinguish between individuals. Artificial Intelligence handles human photos similarly to cookies, enabling more customized services according to user preferences. Some companies are experimenting with facial recognition to determine the moods of their clients and then suggest products accordingly.

In digital marketing, AI is mostly focused on lead conversion and user retention. By utilizing interactive web design, intelligent email marketing, chatbots with artificial intelligence, and other digital marketing services, it can lead a user toward the objectives of the organization. The effect of AI on digital marketing is determined by a number of things. As a subfield of AI, machine learning (ML) studies computer programs that can access data and utilize it to learn on their own. It gathers information from a variety of sources, such as websites, online reviews, menus, and social media accounts. After that, AI makes use of the data to create and provide audience-appropriate content. Comprehensive online study of eateries and their patrons is made possible by AI technologies. Businesses can make greater use of the data at their disposal and connect with potential clients at more convenient times by using AI into their marketing plan. Building client profiles and understanding the consumer journey have been made easier by AI. It enables brands to deliver insightful, tailored content to the different client profiles at every level of the marketing funnel and across all channels, swiftly and simply. AI systems in digital marketing can identify which material is most likely to entice users to return to the website based on past data.

II. LITERATURE REVIEW

Artificial intelligence (AI) is the intelligence exhibited by machines, as opposed to human intelligence. Artificial intelligence is represented by a system of intelligent agent machines that understands its surroundings in order to successfully accomplish its objective. Artificial intelligence, according to Russel and Norvig (2016), is the term used to characterise devices (computers) that mimic the emotive and cognitive capacities of humans. Artificial intelligence has advanced tremendously over the past few decades, thanks to the hard efforts of specialists who have laboured to expand the field's concepts.The effort produced some significant advancements, such as machine learning and big data analytics applications in a variety of contexts and sectors.

The word "artificial intelligence" typically conjures images of human-serving automated robots, as most people have only witnessed human-machine interaction through the usage of robots in films or television shows. Artificial intelligence is the term used to describe any type of computer that must be able to think like a human in order to continuously learn and solve problems. These are the distinctive qualities of AI. People may find repetitious tasks tedious or monotonous. On the other hand, individuals never have to endure a boring work thanks to machines. An artificially intelligent system continuously completes monotonous tasks on behalf of people.

One of the most crucial aspects of artificial intelligence is data intake. Systems using artificial intelligence handle enormous volumes of data. The artificial intelligence system gathers and analyses vast amounts of data in accordance with requirements. Businesses like Google and Amazon manage enormous amounts of data that are too big for people to evaluate. Furthermore, multiple data on multiple individuals, numerous machines, and multiple sources are stored by an artificially intelligent system. This can all show up on the system concurrently or asynchronously. Systems with AI capabilities are made to notice and respond to their environment. They observe their surroundings, behave in accordance with their perceptions, and consider potential future scenarios. For instance, AI can forecast a machine's breakdown time by using historical data. It can notify us in advance of the activity.

In order to understand the scope of research on improving customer experiences with artificial intelligence, the authors conducted a literature review. The implementation issues of autonomous customer experience management (CEM) were discussed by Gacanin and Wagner (2019). The report also described how AI and ML were used to build the intelligence network and important commercial value generator. A chatbot powered by AI and Natural Language Processing (NLP) enhanced the user experience (Nguyen and Sidorova, 2018). Effective data processing made possible by AI and ML algorithms enables us to make the best decisions possible (Maxwell et al., 2011). To analyse consumer behaviour, purchases, likes, dislikes, etc., artificial intelligence (AI) must be applied (Chatterjee et al., 2019).

Artificial Intelligence User Interface (AIUI) has been beneficial for Customer Relationship Management (CRM) tasks (Seranmadevi & Kumar, 2019). Traditional retail stores were transformed into smart retail stores by AI and IoT. Smart retail spaces improved the shopping experience for customers, improved the supply chain, and made shopping easier (Sujata et al., 2019). Artificial Intelligence directs not just physical establishments but also internet enterprises. The five human senses—taste, smell, touch, hearing, and sight—can all be tracked by an AI- supported system, as Sha and Rajeswari (2019) demonstrated while describing the development of AI.

By assisting with segmentation, targeting, and positioning (STP), artificial intelligence can assist marketers with strategy and planning marketing efforts. AI can assist marketers in envisioning the strategic orientation of their company in addition to STP (Huang & Rust, 2017). In order to identify profitable consumer segments, text mining and machine learning algorithms can be implemented in the banking and finance, art marketing, retail, and tourist sectors (Dekimpe, 2020; Netzer et al., 2019; Pitt et al., 2020; Valls et al., 2018).

OBJECTIVES OF AI IN MARKETING INDUSTRY:

AI supports a wide range of goals for the marketing sector and provides a plethora of advantages:

1.Personalisation: By analysing enormous volumes of data to comprehend unique interests, behaviours, and demographics, artificial intelligence (AI) enables marketers to create highly personalised experiences for consumers.

2.Predictive analytics: With the use of artificial intelligence (AI), marketers may better anticipate the wants and behaviours of their target audience and adjust their products and campaigns accordingly.

3. Customer Segmentation: AI systems are able to divide consumers into discrete groups according to attributes like preferences, demographics, and purchase patterns.

APPLICATIONS OF AI IN MARKETING INDUSTRY:

Artificial intelligence (AI) has several uses in the marketing sector, changing how companies attract, interact with, and keep clients. Here are a few particular uses:

1.Recommendation Systems: AI-driven recommendation engines examine user data to offer tailored product recommendations, similar to those found on streaming services like Netflix or e-commerce sites like Amazon.

2.Predictive analytics: AI systems are able to forecast future trends and consumer behaviour by analysing past data.

3.Artificial intelligence (AI) is made possible by natural language processing (NLP), which powers tools like sentiment analysis, chatbots, and content creation.

III. RESEARCH METHODOLOGY

To conduct the literature review, we followed the recommendations provided by Rowley and Slack
The literature review followed a five-step methodology, which is outlined in the parts that follow. The selection of research themes and future prospects was aided by thorough review methods.
Among bibliometric databases, Scopus and Web of Science (WoS) are the most trustworthy. To find pertinent material, we looked through the databases of Scopus and Web of Science (WoS). Yong-Hak claimed that Scopus covered more ground than other databases and that it has over 20,000 peer-reviewed papers from various publishers . For data collecting, we favoured Scopus because of its broader coverage. For improved data management, Scopus provided data analysis grids and sophisticated search filters.

Words like "artificial intelligence" and "marketing" were part of the original search phrase. To obtain the universal collection of papers, artificial intelligence synonyms such as machine learning, deep learning, natural language processing, etc., are combined with boolean operators like "OR." To obtain the intersection set of papers on artificial intelligence and marketing, utilise the boolean operator "AND."
To the search results, inclusion and exclusion criteria are applied. The most pertinent articles for the literature review were extracted with the use of delimitation and inclusion and exclusion criteria. Since journal articles are considered to be "certified knowledge," the search results are limited to those published in journals in order to meet the study objective . The search results did not include conference papers, book chapters, comments, erratums, etc.

FINDINGS:

The study domain's intellectual structure was provided using co-citation analysis. The research domain is categorised using the computed centrality index into various clusters.The writers have chosen only a few publications with the highest number of citations out of a cluster of several papers. Five clusters in all have been chosen by the author. The number of papers in each cluster ranged from two to five. They then looked over and talked about each cluster's recommendations as well as the research focus.

The primary focus of the authors in cluster one was the trust element and how it affects selling and distribution in manufacturing and service organisations alike. The writers talked about how trust fosters enduring ties between suppliers and buyers, which reduces market uncertainty. In order to obtain a competitive edge, the authors suggest that, regardless of the industry segment, the relationship and trust between customer and supplier be maintained. The authors advise conducting research in order to create a marketing model that takes the relationship into account going forward.
The authors talked about the connections between market orientation and business performance in cluster two. Additionally, the author has talked about how the market is changing to become more customer-centric. Additionally, intangible elements like interactions, knowledge, and abilities are becoming more and more important. In order to explore the effects of additional factors on market orientation and the relationship between market orientation and market share, the author has provided future study directions.The author explains how value is created for customers in cluster three. The organisation creates structural equation models based on theoretical, methodological, and statistical analysis to give customers a competitive advantage in the long run. Applying such ideas to create more value is a great potential, particularly in the retail industry.The writers of cluster four talked on the applications of data science in a variety of industries, including management, marketing, consumer research, and finance.

SUGGESTIONS:

The following are some ideas for using AI in marketing:

1.Put Personalised Recommendations Into Practice: Make use of AI-powered recommendation engines to provide your

consumers with tailored content or product recommendations based on their browsing history, past behaviour, and preferences.

2. Apply Forecast Analysis: To predict future trends, consumer behaviour, and market demand, use predictive analytics.

3. Use Chatbots for Customer Support: Use AI-driven chatbots to instantly respond to questions from customers and support requests via a variety of channels, such as your website, social media .

LIMITATIONS:

Although artificial intelligence (AI) has revolutionised the marketing sector, it still has several drawbacks.

1.Data Quality and Privacy Issues: AI makes extensive use of data, and erroneous or biassed data might provide faulty conclusions and judgements.

2. Absence of Creativity and Intuition: Although AI is incredibly fast at processing data and analysing jobs, it frequently lacks the human marketers' intuition and creativity.

3. Complexity of Implementation: Using AI in marketing calls for knowledge of both technology and marketing.

IV. CONCLUSION

Artificial Intelligence (AI) describes methods that enable machines to carry out cognitive tasks that call for human intelligence. These comprise reasoning, learning, and interacting with the environment around the machine. Among the most well-known AI methods are machine learning and deep learning. AI can personalize brand experiences, which facilitates the development of user engagement and loyalty. To enhance the user experience, marketers employ language-based AI as engagement managers, payment processors, and sales tools. Customers may now rely on chatbots to complete the purchasing process for them rather of having to figure it out on their own. Artificial intelligence (AI) based on language is developing quickly.

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