Role of Artificial Intelligence (AI) in Marketing

Jenifer Angelen S

Research Scholar, PG and Research Department of Commerce, Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu, India, jeni92angel@gmail.com

Dr. M. Mohamed Siddik

Assistant Professor, PG and Research Department of Commerce, Sadakathullah Appa College (Autonomous), Tirunelvili, Tamilnadu, India, mohsi25@sadakath.ac.in

Abstract

Disruptive technologies along with the internet of things, large facts analytics, blockchain, and synthetic intelligence have modified the methods agencies' function. all the disruptive technology, artificial intelligence (AI) is the modern-day technological disruptor and holds a large advertising transformation ability. Practitioners International is looking to figure out satisfactory suit AI solutions for its advertising capabilities. However, a scientific literature review can spotlight the importance of synthetic intelligence (AI) in advertising and chart destiny studies directions. Furthermore, co-quotation and co-incidence evaluation presented the conceptual and intellectual community. Data clustering using the Louvain set of rules helped me become aware of studies sub-issues and future studies guidelines to enlarge AI in marketing.
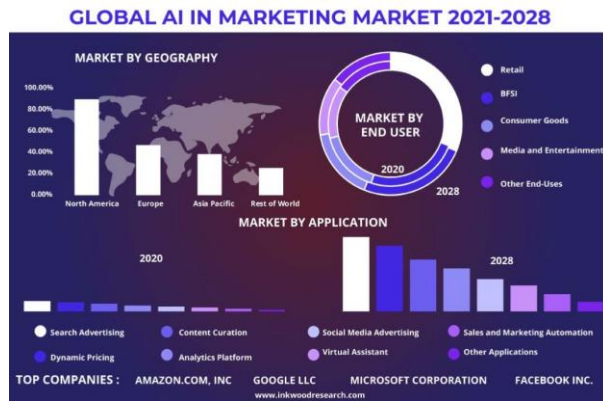
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INTRODUCTION

Artificial intelligence uses AI to automate the curation of a large quantity of data and data related to marketing blends for you to create knowledge. Subsequently, AIM makes use of the expertise to carry out and automate marketing procedures, such as producing marketplace intelligence. Such functionality allows AIM to head more duration to take place personalization for each client to recognize his/her wants and needs, allowing such, not possible features inside the beyond to become possible now. For comparison, AIM can drill all the way down to the individual purchaser degree throughout numerous sports (e.g., acquisition, intake, and disposal) associated with services or products, even as conventional advertising and marketing tend to focus on the firm degree and

acquisition/buy pastime most effective. Due to the importance of AIM, it has ended up a crucial tool that is speedy becoming part of most agencies to create, disseminate, and practice expertise. Many reports have been published over the current years approximately the ability of AI to enhance marketing drastically. Based on a survey conducted with the aid of Accenture, 86% of the C-suite executives believed that it is crucial to scale AI across their businesses, and 76% believed the danger of going out of business if they fail to implement it inside the subsequent five years. Based on any other survey posted, extra than 1400 commercial enterprise-to-enterprise (B2B) advertising executives believed that the top sector to include AI is the expert services area. Nevertheless, the usage of AIM has been

conservative, and the maximum of the programs are nevertheless in the experimental stage.

India Artificial Intelligence Market Size, 2023-2028 (in Million US$)

The India artificial intelligence market size reached US$ 680.1 Million in 2022. Looking forward, IMARC Group expects the market to reach US$ 3,935.5 Million by 2028, exhibiting a growth rate (CAGR) of 33.28% during 2023-2028. Artificial intelligence (AI) refers to the potential of a machine to mimic the capabilities of the human mind. It assists in learning, planning, recognizing human-like speech and solving problems according to past experiences. It comprises hardware components, including central processing unit (CPU), graphics processing unit (GPU), field-programmable gate array (FPGA) and application-specific integrated circuits (ASIC). It also has software components like deep learning, natural language processing (NLP) and machine learning (ML), which provide meaningful insights and process large amounts of data.[1]
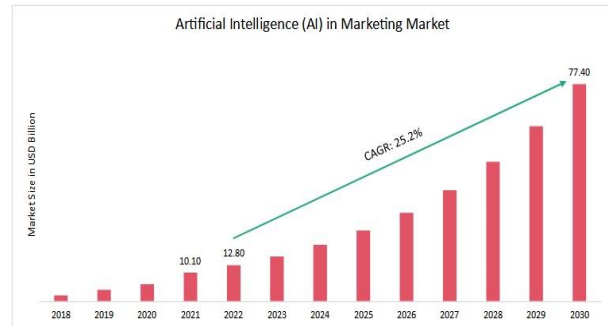
ARTIFICIAL INTELLIGENCE IN MARKETING

Artificial intelligence (AI) has revolutionized the field of marketing, offering new opportunities to businesses for data analysis, customer engagement, and personalized experiences. Here is some ways AI is used in marketing:

Data analysis

AI enables marketers to process and analyse vast amounts of data quickly and efficiently. It can uncover patterns, trends, and insights from customer data, social media interactions, website analytics, and other sources. AI-powered algorithms can identify correlations, predict customer behaviour, and make data-driven recommendations for marketing strategies.

Personalization

AI helps marketers deliver personalized experiences to customers. By leveraging data about customer preferences, browsing behaviours, and purchase history, AI algorithms can generate personalized product recommendations, tailored content, and targeted advertisements. This level of personalization improves customer engagement and increases the likelihood of conversion.

Chatbots and virtual assistants

AI-powered chatbots and virtual assistants provide instant and personalized customer support. They can handle routine inquiries, provide product recommendations, and assist with transactions. Chatbots can engage with customers 24/7, improving response times and enhancing customer satisfaction.

Predictive analytics

AI algorithms can predict customer behaviours and outcomes based on historical data. Marketers can use predictive analytics to anticipate customer churn, identify potential leads, and optimize marketing campaigns. By leveraging these insights, businesses can make proactive decisions and allocate resources effectively.

Content creation

 AI tools can assist in content creation by generating written content, such as blog posts, social media captions, and email subject lines. AI algorithms analyze existing content, understand writing styles, and produce human-like text. While AI-generated content still requires human review and editing, it can help save time and provide creative inspiration.

Image and video analysis

 AI can analyse images and videos to extract valuable insights. This technology enables marketers to understand visual content better, such as identifying objects, people, locations, and sentiments. It can be used for content moderation, visual search, and targeted advertising based on image recognition.[2]

Customer sentiment analysis

 AI algorithms can analyse customer sentiments expressed in social media posts, reviews, and customer feedback. Marketers can gain a deeper understanding of customer opinions, preferences, and brand perceptions. This insight helps in reputation management, brand monitoring, and adapting marketing strategies accordingly.

While AI offers numerous benefits to marketers, it's important to balance automation with human oversight and ethical considerations. Effective use of AI in marketing requires understanding its limitations, maintaining data privacy, and ensuring transparency and fairness in algorithms' decision-making processes.

APPLICATIONS OF AI IN MARKETING

There are several key applications of AI in marketing that have transformed the way businesses engage with customers and optimize their marketing efforts. Here are some notable examples:

Customer segmentation and targeting

AI algorithms can analyse customer data to segment audiences based on various criteria such as demographics, preferences, behaviours patterns, and purchasing history. This helps marketers tailor their messaging and offers to specific customer segments, improving the relevance and effectiveness of marketing campaigns.

Predictive analytics

 AI-powered predictive analytics can forecast customer behaviour, such as identifying potential churners, predicting lifetime value, or forecasting sales trends. By leveraging historical data and machine learning algorithms, marketers can make data-driven decisions, optimize their strategies, and allocate resources more effectively.

Personalization and recommendation engines

AI enable marketers to deliver personalized experiences to customers at scale. Recommendation engines powered by AI analyses user behavior and historical data to provide personalized product recommendations, content suggestions, and offers. This enhances customer engagement, drives conversions, and improves overall customer satisfaction.

Chatbots and virtual assistants

AI-powered chatbots and virtual assistants are used to automate customer interactions and provide real-time support. They can handle routine inquiries, answer frequently asked questions, assist with purchases, and provide personalized recommendations. Chatbots help businesses improve customer service and engagement while reducing response times and operational costs.[3]

Content generation and optimization

AI algorithms can generate and optimize content for marketing purposes. For instance, AI can create written content like blog posts, social media captions, or email subject lines. It can also optimize content for search engines, ensuring better visibility and higher rankings. AI tools assist marketers in streamlining content creation processes, enhancing efficiency, and maintaining consistency.

Sentiment analysis and social listening

AI can analyze social media posts, reviews, and other online content to gauge customer sentiment and understand brand perception. This allows marketers to monitor conversations, identify trends, and proactively address customer concerns. Sentiment analysis helps businesses manage their reputation,

make informed decisions, and adapt their marketing strategies accordingly.

Ad targeting and optimization

AI-powered advertising platforms leverage machine learning algorithms to optimize ad targeting and placement. These platforms analyze user data, behavior patterns, and contextual information to deliver highly targeted ads to the most relevant audiences. This results in improved ad performance, higher conversion rates, and increased return on ad spend (ROAS).

Voice search optimization

With the rise of voice assistants like Siri, Alexa, and Google Assistant, optimizing marketing efforts for voice search has become crucial. AI helps in understanding voice queries, providing accurate responses, and optimizing content for voice-based interactions. Marketers can leverage AI-powered voice search optimization techniques to enhance their visibility and reach in voice-enabled devices.

These are just a few examples of how AI is transforming the marketing landscape. As AI continues to advance, it will likely introduce new applications and opportunities for marketers to optimize their strategies and deliver more personalized and engaging experiences to their target audiences.

USE OF ARTIFICIAL INTELLIGENCE IN MARKETING

Artificial intelligence (AI) is extensively used in marketing across various domains and processes. Here are some specific use cases of AI in marketing:

Data analysis and insights: AI enables marketers to process large volumes of data quickly and extract meaningful insights. AI

algorithms can analyses customer data, market trends, and social media interactions to identify patterns, correlations, and actionable insights. This helps marketers make data-driven decisions and optimize marketing strategies.

Personalization and recommendation systems

AI-powered recommendation engines leverage customer data to deliver personalized product recommendations, content suggestions, and offers. By analyzing customer behavior, preferences, and purchase history, AI algorithms can provide relevant and timely recommendations, enhancing customer engagement and conversion rates.

Chatbots and virtual assistants

AI-driven chatbots and virtual assistants provide instant customer support, handle inquiries, and assist with transactions. Chatbots can engage with customers 24/7, answering queries, providing product information, and guiding users through the purchasing process. They enhance customer experience, reduce response times, and free up resources for other tasks.

Predictive analytics and customer segmentation

AI algorithms can predict customer behaviours, identify potential leads, and segment customers based on various attributes. This enables marketers to tailor their messaging and campaigns to specific customer segments, optimizing targeting and personalization efforts.

Content creation and optimization

AI tools can assist in content creation by generating written content, headlines, and social media posts. AI algorithms analyses existing content and use natural language processing to produce human-like text. Additionally, AI can optimize content for search engines, improving search rankings and visibility.

Image and video analysis

AI enables marketers to analyse and understand visual content. Image recognition algorithms can identify objects, people, locations, and sentiments, allowing for visual search, content moderation, and targeted advertising based on image analysis. Video analysis helps in content tagging, sentiment analysis, and personalized video recommendations.

Ad targeting and optimization

AI algorithms optimize ad targeting by analysing user data, behaviours patterns, and contextual information. This helps deliver highly targeted ads to the most relevant audiences, increasing the chances of engagement and conversion. AI can also optimize ad placement, bidding strategies, and budget allocation for maximum return on investment.[4]

Social media monitoring and sentiment analysis

AI can analyze social media posts, comments, and reviews to gauge customer sentiment, monitor brand perception, and identify emerging trends. This helps marketers understand customer opinions, track brand reputation, and respond to customer feedback effectively.

These are just a few examples of how AI is applied in marketing. AI continues to advance, offering marketers new opportunities to improve customer experiences, enhance targeting, and optimize marketing efforts for better results.

ADAPTING TO AN AI MARKETING LANDSCAPE

Adapting to an AI marketing landscape requires a strategic approach and a willingness to embrace new technologies and methodologies. Here are some steps to consider:

Stay updated on AI advancements

Keep yourself informed about the latest developments in AI technology, particularly those relevant to marketing. Follow industry publications, attend conferences, and participate in webinars to stay up to date with AI trends, best practices, and case studies.

Assess your data capabilities

AI relies heavily on data, so evaluate your data infrastructure, collection methods, and data quality. Ensure you have access to clean, relevant, and structured data that can be effectively utilized by AI algorithms. If needed, invest in data management tools and processes to improve data accessibility and quality.

Identify AI use cases

Evaluate your marketing processes and identify areas where AI can add value. This could include customer segmentation, personalized recommendations, content creation, predictive analytics, or social media sentiment analysis. Prioritize the use cases based on their potential impact and feasibility within your organization.

Choose the right AI tools and partners

Research and select AI tools or platforms that align with your marketing goals and requirements. Consider factors like ease of integration, scalability, and customer support. If necessary, engage with AI technology partners or consultants who can help you navigate the AI landscape and implement solutions effectively.

Develop internal expertise

Foster a culture of learning and upskilling within your marketing team. Provide training and resources to help team members understand AI concepts, algorithms, and applications. Encourage them to explore AI tools, experiment with data analysis, and collaborate on AI-driven projects.

Start small and iterate

Begin by piloting AI initiatives on a small scale to test feasibility and gather insights. For example, implement a chatbot for customer support or run a targeted ad campaign using AI optimization. Analyze the results, gather feedback, and iterate to improve performance and expand AI implementation gradually.

Ensure ethical and transparent practices

AI in marketing should prioritize ethical considerations, data privacy, and transparency. Be mindful of potential biases in AI algorithms and take steps to ensure fairness and inclusivity. Communicate clearly with customers about the use of AI in marketing initiatives and obtain consent where necessary.

Monitor and measure results

Establish key performance indicators (KPIs) aligned with your AI marketing objectives and track them consistently. Monitor the impact of AI-driven initiatives on customer engagement, conversions, customer satisfaction, and other relevant metrics. Continuously analyze and optimize your AI strategies based on data-driven insights. Remember that while AI can enhance marketing efforts, it should complement human expertise rather than replace it entirely. Strive for a balance

between automation and human creativity to create impactful and personalized marketing experiences for your target audience.[5]

EXAMPLES OF AI IN MARKETING

Chatbots

AI-powered chatbots are widely used in marketing to provide instant customer support, answer inquiries, and guide users through the purchasing process. They can handle routine tasks, engage with customers 24/7, and deliver personalized recommendations based on user interactions.

Personalized recommendations

AI algorithms analyses customer data and behaviours to generate personalized product recommendations. These recommendations can be displayed on websites, in email marketing campaigns, or within e-commerce platforms, increasing the chances of conversion and customer satisfaction.

Predictive analytics

AI enables marketers to predict customer behaviours and outcomes. For instance, predictive analytics can identify potential churners, forecast sales trends, or predict customer lifetime value. These insights help marketers make data-driven decisions and optimize their strategies accordingly.

Content generation and optimization

AI tools can generate written content, such as blog posts, social media captions, or email subject lines. They analyse existing content, understand writing styles, and produce human-like text. Additionally, AI algorithms can optimize content for search engines, improving visibility and search rankings.

Image and video analysis

AI-powered image and video analysis allow marketers to extract valuable insights. Image recognition algorithms can identify objects, people, locations, and sentiments, enabling visual search, content moderation, and targeted advertising. Video analysis helps in content tagging, sentiment analysis, and personalized video recommendations.

Social media sentiment analysis

AI algorithms can analyse social media posts, comments, and reviews to gauge customer sentiment and monitor brand perception. This helps marketers understand customer opinions, identify trends, and respond to customer feedback in a timely manner.

Ad targeting and optimization

AI algorithms optimize ad targeting and placement by analysing user data, behaviours patterns, and contextual information. This enables marketers to deliver highly targeted ads to the most relevant audiences, increasing engagement and conversion rates.

Voice search optimization

With the increasing popularity of voice assistants, AI is used to optimize marketing efforts for voice search. Marketers can leverage AI-powered techniques to understand voice queries, provide accurate responses, and optimize content for voice-based interactions.

These examples illustrate the diverse applications of AI in marketing, providing marketers with valuable tools and insights to enhance customer experiences, optimize targeting efforts, and drive business growth.

AI MARKETING OPERATION MODES WITH HUMAN

AIM entails people and machines, and there are four approaches to obtain this. First, fully AI replaces humans with machines, which includes recommending classified ads in a actual-time manner. Second, AI-human allows AI to display, gather, and examine information to offer beneficial information for humans to make decisions, which include making a hiring decision to enhance consumer relationships.[6] Third, human AI permits people to monitor and gather facts to be provided to AI to make choices, consisting of monitoring a human health situation. Fourth, aggregated humans and AI allows both human beings and AI to contribute to distinct elements of the decision-making method. While the first approach replaces human intelligence with machines, the other three processes supplement human intelligence with advanced gadget abilities, specifically high computational and storage capabilities for coping with accurate and complete records units, which allows to offer higher-fine choice-making and reasoning approaches. [7] The operation modes with human participation are useful of their very own accord due to the diversity of advertising troubles and decisions. The issues for selecting the best operation mode are explained in [41]. In the completely AI method: (a) the problems are well described and nicely dependent; (b) the troubles, which aren't new and amazing, can be solved the use of previous expertise; (c) the issues are large; (d) the selections are generated in a actual-time way; (e) the decisions are measurable; (f) the choices aren't interpretable in which the reasons for the choices can be doubtful and uncertain at instances [10]. The rest of the operation modes loosen up sure criteria in those concerns. For example, the aggregated human and AI method is extra suitable for fixing a brand new or super hassle where previous information is unavailable.

At present, most, if now not all, AIM tactics proposed inside the literature fall into the full AI and human-AI categories. Both AI-human and the aggregated human and AI approaches can be explored to find the entire potential of AIM.

CONCLUSIONS

Artificial intelligence marketing (AIM), that is an interdisciplinary research topic, is a disruptive era that permits machines to automate the technique of amassing and processing a massive quantity of records and data to create knowledge associated with advertising and marketing mix. This capability is essential to happen personalization at scale, which has been impossible through human attempts by myself. This paper synthesizes the literature and develops an AIM framework to create a quantum soar in purchaser courting enhancement, including purchaser consider, delight, commitment, engagement, and loyalty. The strategic framework has three major additives, specifically pre-processor, important processor, and reminiscence garage, and it's miles developed based totally at the curation of a extensive variety of applicable literatures. The fundamental processor can be characterized through its hypothetical talents, studying paradigms, and its operation modes with human. Despite the comprehensiveness of the proposed AIM framework, there are various research possibilities, along with: (a) getting to know emotion or attitude; (b) putting off bias and discrimination; (c) enhancing explainability and interpretability; (d) mastering tacit know-how; and (e) exploring various ways to gather and harness

consumer, user, and external marketplace knowledge.

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