Critical Review on Impact of Artificial Intelligence on Marketing

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Abstract

Marketing strategies may benefit from AI's enhancements, and the technology can also be used to generate and distribute value to consumers in novel ways. For instance, by incorporating AI into programmatic advertising and social media marketing, a more complete picture of consumer behavior, predictive analytics, and deeper insights may be achieved. Biometrics, speech, and conversational user interfaces are just a few examples of the innovative new marketing techniques that may benefit both businesses and customers. All of these developments have the traits of hyper-personalization, cost-effectiveness, scalability, and in-depth comprehension.

Before AI is widely used, there are significant concerns that must be addressed, such as the possibility of it being used maliciously, the consequences on employment displacement, and the technology itself. The rapid development of AI in marketing over the last several years suggests that its widespread use is imminent. The long-term effects of widespread adoption are critical to think about since an AI-powered business requires different skill sets to succeed, affects the way marketers and brands function, and alters consumers' expectations.

Key Words: Behaviour, skill sets, Artificial Intelligence, spending, brands.

1. Introduction

Technology, business, and academia all related to artificial intelligence (AI) are growing rapidly. Despite considerable attention, artificial intelligence's marketing applications have not yet seen mainstream acceptance. However, AI has the potential to significantly impact the marketing industry. Therefore, studying the use of AI in advertising is essential. The long-term effects of AI on advertising may be grasped at a high level by studying its present uses, its possible future applications, how to deploy it, and its potential for development.

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predictive analytics, and deeper insights may be achieved. Biometrics, speech, and conversational user interfaces are just a few examples of the innovative new marketing techniques that may benefit both businesses and customers. Hyper-personalization, cost-effectiveness, scalability, and in-depth understanding are shared features of all these breakthroughs.

While the concept of artificial intelligence (AI) has been known for decades, it has only lately been viable to apply. While AI is still in its infancy as a technology, its early implementations have shown remarkable effectiveness in many fields, notably in advertising. New developments in AI technology and an increasing number of successful use cases have piqued the interest of marketing professionals. This enthusiasm has not been matched by a shared understanding of the technology's inner workings, its potential applications, or its far-reaching consequences.

1.1 Artificial Intelligence (AI)

Artificial intelligence, or AI, refers to computer systems that take in data to carry out activities normally performed by intelligent individuals in an efficient and effective manner. Guruduth Banavar, who oversees AI research at IBM, has defined the field as "a portfolio of technologies" (Kaput, 2016). These many forms of AI have distinct applications and are progressing at different speeds, but they all have a common goal: to enable computers to do tasks normally associated with human intellect. There are primarily two types of AI:

Artificial General Intelligence (AGI)

AGI, also known as Strong AI, has the potential to carry out every job a human is capable of carrying out. Artificial intelligence that can mimic human behavior and perform a broad range of activities is a staple of science fiction. There have been no successful efforts to create genuine AGI because of how complicated human nature is and how little we really know about how brains operate. Since AGI at its present level of development does not carry any practical consequences for marketers, it will not be examined in great detail for the rest of this study.

Narrow AI

Narrow AI, also known as Weak AI, excels in a narrow set of activities. Image recognition, predictive analysis, driving, and client segmentation are just few of the areas where this approach excels. This is the most popular kind of AI, and it manifests in our daily lives via things like spam mail bots and website recommendation systems like Amazon's suggested products and Netflix's customized movie/TV program recommendations.

1.2 Artificial Intelligence in Marketing

Even though 98% of marketers said they were interested in integrating AI soon, action is only now being taken to make that a reality. In 2017, just 20% of businesses have fully deployed AI solutions at scale (Bughin, McCarthy, & Chui, 2017). This chasm between interest and action shows that marketers are not too far behind to start using AI, despite what the wave of hype around the issue may have you think. However, AI marketing applications are expanding quickly, complementing the many cutting-edge tools already accessible to businesses. As such, 2018 and the subsequent twenty-four to forty-eight months may be a watershed year for the widespread use of AI in advertising.

With just around 2.55 percent of all businesses having invested in AI so far, marketing is now the fourth biggest use case of AI in terms of resources spent (Naimat, 2016). AI has been around for decades in marketing, but only recently has there been a surge in interest and viability. Some of these include a rise in interest in the field and a large pool of highly talented professionals eager to advance the industry, as well as increased computing capabilities that make processing AI algorithms at scale cheaper than ever. As a consequence of the current buzz around artificial intelligence, $27 billion in venture capital has been allocated to AI firms, which is three times as much as in 2016 (Venture Scanner, 2018).

Now more than ever, AI technology is practical, and its commercial potential is starting to emerge in a wide range of forms. Despite the tiny number of companies that have proven to adopt large-scale AI systems, numerous companies of varying sizes are implementing solutions that are easier to set up and operate. I developed a scale based on a crucial determinant: amount of participation, to help illustrate the varied degrees to which businesses may deploy AI. Involvement may be defined as the degree to which AI plays a crucial role in a company's core business offers or day-to-day operations, as well as the complexity of the AI applications used by that company. While low-involvement AI solutions have reduced obstacles to entry (e.g., less resources needed), the full potential of more comprehensive, high-involvement AI solutions may be unrealized by enterprises who use them. In contrast, businesses that use high-involvement AI solutions may reap significant advantages at the heart of their operations, but only after devoting much more resources (such as money, time, and experience) to the task.

1.3 Levels of AI Implementation

Low Involvement

Low Participation Artificial intelligence (AI) is made up of third-party solutions that may be deployed and managed with minimal outlays of time, money, and other resources. Artificial intelligence with less participation has reduced obstacles to entry but is less strong. These options might be either paid subscription software with a nominal monthly price or completely free software. One defining feature of minimal involvement AI is that it does not provide a primary differentiator for the business. These are one-off programs that make subtle use of AI behind the scenes.

Low-Medium Involvement

AI systems that fall into the low to medium involvement category are those designed to deal with simple, task-based jobs. Situations requiring moderate effort to use Although they save humans time and effort, AI can't function without human supervision and input.

Medium Involvement

Applications of artificial intelligence make advantage of rather powerful technical capabilities in some domains of business. These types of AI provide more niche applications defined by consumer interaction with the brand, rather than playing a central part in the company's overarching strategy.

Medium-High Involvement

Engagement Level: About Average Various AI-based technologies play critical roles in the company's advertising campaigns. When it comes to marketing, this kind of AI deployment is distinguished by its widespread rather than targeted use (e.g., systems that handle the full customer relationship management process as opposed to only managing email customization). This phase may be defined by the local or departmental use of AI inside big corporations, as opposed to its widespread deployment at this time.

High Involvement

High participation Incorporating AI involves using the most cutting-edge, fundamental tools now accessible to enterprises. These may be artificial intelligence (AI) systems developed in-house and utilized by the organization to make key choices and carry out essential tasks. Active participation If a corporation uses artificial intelligence, it means that technology is integral to its value offering and contributes to the company's success. These advanced systems are integral to the way the business functions and represent the cutting edge of current technology..

1.4 Programmatic Advertising

Automatic computerized acquisition of digital advertising inventory is known as "programmatic" or "programmatic advertising." Historically, media purchasing has been a time-consuming procedure for marketers due to the need to negotiate prices, schedules, and other terms of advertising contracts. The game in digital media has been completely altered by programmatic. Marketers can now provide highly targeted and customized ads at scale by automating processes using insights powered by consumer data. As eMarketer predicts, by 2019, programmatic would enable 4 out of 5 digital ad buys, totaling $45.72 billion, having started as a solution for organizations to automatically dispose off leftover ad inventory.

2.Objectives

- To investigate the impact of artificial intelligence.
- To investigate numerous facets of artificial intelligence.
- Analyze the necessity of adopting it as a marketing strategy by marketers for the promotion of their products and services.

2.1 Methodology

Both qualitative and quantitative research methods may be used for gathering and analyzing data. The focus of quantitative research is on numerical and statistical data, whereas the focus of qualitative research is on abstract ideas and language. Both approaches to learning are vital, but they specialize in distinct areas because they focus on different objectives and use different methods. This study used a qualitative approach to analyze AI's impact on the marketing industry by looking at how it has been used so far. The goal of this strategy is to examine AI in advertising from a more comprehensive and in-depth perspective. Qualitative research is a method of gaining a deeper understanding of a topic, group, or society. Depending on the kind of phenomena being studied, qualitative research may offer us with a comprehensive knowledge of events, information on human groupings, and unique tendencies underlying these events and individuals. Qualitative research allows for the extraction of meaning, people, or data from the study, in contrast to the objectivity of standard laboratory research. In order to learn about a population, qualitative research use methods that are not quantitative. As of 2016 (Stephanie). In order to better comprehend a study issue or subject, this method attempts to do it from the viewpoint of the local people. In particular, good research is helpful for learning about the values, norms, and customs of a people in a certain cultural setting. When combined with quantitative tools, qualitative analysis may provide a more nuanced and complete picture of the issue at hand and its implications. In this sense, qualitative research differs somewhat from traditional scientific research because, while the 14 qualitative observations can often be applied to people with characteristics that are similar to those in the study population, the interpretation of a specific social background or phenomenon is typically richer and more complex than the generalization of information to other geographical regions or populations.

3. Literature Review

Over the next five years, the 15% of businesses who are able to effectively apply customization are projected to see a $800 billion revenue shift (Abraham et al., 2017). This is according to a research performed by Boston Consulting Group. Value in the economy may be increased via targeted marketing campaigns. Marketers are having trouble adopting customized marketing despite the fact that 96% of marketing executives agree that it helps develop stronger client connections (Evergage Inc., Researchscape International, 2017). Similar to the problem of artificial intelligence in marketing, marketers recognize the significance of customization but lack the expertise to properly use it.

Customers gain as much from firms' successful use of tailored marketing. According to Kibo (2017), customized marketing results in a 42 percent increase in conversions from personalized calls to action

(CTAs), a 40 percent increase in average order value, and a 600 percent increase in total conversion rates. The explanation behind this is complex. One reason for this is that direct personalization of marketing messages increases their chances of being read. The reticular activating system (RAS) in the brain is responsible for this (Stevens and Hening, 2007).

Similarly, optimizing ad placement with the use of artificial intelligence is becoming more important because of the significant impact that context plays in influencing performance. Ads seen on sites deemed irrelevant or unconnected to the client's journey were 11X more likely to dissuade the buyer from completing the purchase, according to research by Inskin Media (2014). They were also 40% more inclined to buy from adverts shown on relevant, reputable sites. Customers' reactions to advertisements are clearly affected by their surroundings.

The marketing applications of image recognition and computer vision are many. Convolutional neural networks (CNNs) are an artificial intelligence technique used in these technologies (Keenan, 2017) that enable computers to analyze picture data more quickly than normal neural networks by grouping pixels together.

Consumers' propensity for images in digital marketing efforts (Wurmser, 2017) combined with recent advancements in picture recognition make this technology an exceptionally beneficial tool for marketers to utilize. The IMAGENET competition for machine learning algorithms saw an improvement in the success rate of image identification from 72% in 2010 to 96% in 2015. Similarly, from July to December of 2015, the success percentage of "difficult-to-detect" pictures in the KITTI vision benchmark increased dramatically, from 39% to 87% (Agrawal et al., 2016).

With 3.01 billion monthly active users, the influence of social media on marketing strategies is evident (Sikandar, 2017). The effectiveness of social media in bolstering marketing efforts at all stages of the sales funnel has been shown repeatedly. As a result, marketers will need to include artificial intelligence (AI) into their use of social media. Marketers have a difficulty from the daily influx of billions of photographs posted on social media (Meeker, 2016).

Overall, marketing is a discipline that calls for both analytical and imaginative skills. Because of this inherent feature, marketers may especially profit from AI. Rocket Science predicts that when AI is used to automate mundane and repetitive jobs, "people will see an increase in the amount of time they have for tasks around critical thinking and creativity" (Rocketspace et al., 2016). Therefore, as more time is made available for more complex, people-oriented tasks, marketers should anticipate a greater emphasis on originality in their day-to-day work. This means that qualities like empathy and creativity will become more valuable differentiators in the business world. In the AI Marketing Era, the brands who are able to surprise and please their consumers the most will dominate the industry.

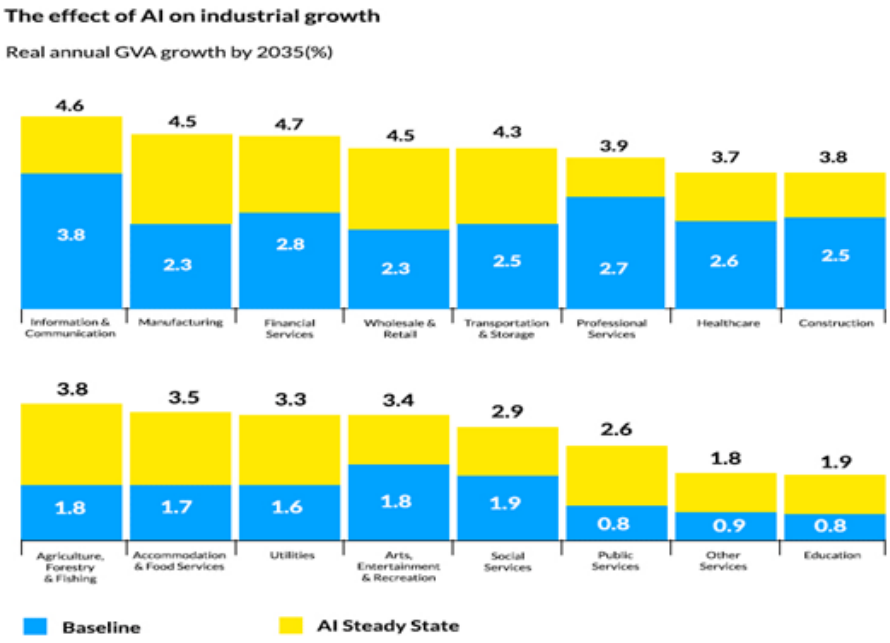
A chatbot is a text-based conversational program that allows a human user to have an automated dialogue with the app. While 95% of executives expect their use of chatbots to rise in the near future, just 9% of Fortune 500 firms are actually using them, according to a survey by SAP (SAP Hybris, 2018). Chatbots have earned the attention they've been getting because to their usefulness in fields like customer service and e-commerce. There are now two major categories of chatbots. The first kind consists of chatbots that can only react to predefined instructions based on a set of rules. The chatbot cannot respond to the user if the user does not submit the proper command. AI-driven chatbots are the second kind. Conversational AI makes use of natural language processing, natural language understanding, natural language generation, and machine learning to simulate natural language interactions. This kind of chatbot is able to recall and use knowledge gained from previous interactions with a user. My focus will be on chatbots driven by artificial intelligence (AI), since they are rapidly replacing humans in professional settings (Pratt, 2017).

4. Impact of AI on other industries

Artificial intelligence (AI) is already widely employed in a wide range of sectors, including gaming, banking, retail, commercial, government, etc., and is gradually approaching the manufacturing sector, enabling industrial automation. By streamlining the future, AI-powered robots are improving manufacturing efficiency, creating new possibilities, and bringing machine interaction closer to that of human connection. Knowledge work is what automation does best, so if we can find better methods to automate routine chores, we can redo how humans and computers live, work, and interact to establish a better digital economy. Artificial intelligence helps solve numerous long-standing problems within the sector, such as a lack of qualified workers, complicated decision-making processes, integration problems, and an abundance of data. Artificial intelligence can be used to revolutionize industrial processes. Improvements in computer graphics have long been utilized in quality control to spot manufacturing flaws as they occur. Artificial intelligence (AI) with computer vision may rationalize how information is grasped given that manufacturing requires more information than ever before and plant managers do not want to pay humans to input information.

A camera in the plant may record a worker taking raw materials from a shelf and then automatically creating a stock transaction. This will be the most intuitive way for users to interact with computers; they won't have to enter data or scan documents.

The IoT and AI will have an effect on us. The Internet of Things will facilitate the distribution of goods and services to consumers who may be unaware of their need for them. In addition, the Internet of Things can relay detailed data to manufacturers and retailers so they may investigate product quality and potential causes of failure. Simply said, the Internet of Things is an informational onslaught that may help artificial intelligence learn and improve. Improved generative design techniques will result, allowing for more evolutionary-minded product redesign.



5. Conclusion

The dawn of artificial intelligence in marketing has far-reaching consequences. The ability to properly integrate and manage AI solutions is becoming more important for marketers as AI continues to advance

and gain traction in the industry. Just as crucial to an individual's and a company's success is an appreciation of their position in the value creation and distribution processes enabled by AI in the workplace.

The ability of marketers to create and distribute value at scale to the right people at the right time in the right way is greatly enhanced by artificial intelligence, and this has enormous benefits for marketers, consumers, and society at large. This potential may be achieved through fostering empathetic and creative thinking among staff and maintaining a data-driven culture that places a premium on excellence. With the help of AI, marketers can devote more time and resources to initiatives that directly benefit customers, employees, and society as a whole, such as developing new products, fostering a more positive work environment, and encouraging innovative ideas.

Marketers' interactions with clients, the strategies and technology they use, the knowledge and abilities that are prized at work, and the character of their daily tasks will all be drastically altered in the AI Marketing Era. Artificial intelligence has the potential to transform marketing in ways comparable to those brought about by the introduction of personal computers.

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