Chapter 3
Identifying the Applications of Artificial Intelligence in Online Marketing

Rasoul Abbasi

Hazrat-e Masoumeh University, Iran

Mohadeseh Esmaili

Hazrat-e Masoumeh University, Iran

ABSTRACT

The integration of artificial intelligence (AI) in marketing has revolutionized customer engagement, product design, advertising, pricing, and distribution. AI's diverse applications, driven by algorithms, enhance data analysis, enabling more effective marketing and sales strategies. In product design, AI creates personalized value propositions aligned with individual customer needs. In advertising, AI facilitates targeted and accurate ads, optimizing returns and reducing waste. AI transforms pricing through dynamic pricing using predictive algorithms for cost-effective and competitive strategies. In distribution and supply chain, AI enhances speed, accuracy, and efficiency through real-time monitoring and predictive modeling, ultimately improving customer satisfaction.

INTRODUCTION

Nowadays, artificial intelligence-based marketing has become highly prevalent, attracting increasing attention from researchers worldwide. Currently, research on the independent assessment of the impact of artificial intelligence functions on discrete marketing has garnered considerable attention from researchers (Prabowo et al., 2019; Hildebrand, 2019; Jarek & Mazurek, 2019). A recent study by McKinsey indicated that the most popular applications of artificial intelligence in organizations relate to optimizing marketing services and processes (McKinsey, 2022). Continuous technological advancements have brought about significant changes in the evolution of marketing, affirming that marketing can leverage artificial intelligence (AI) hand in hand to innovate and implement a new approach (Siau,

2017; Wirth, 2018). Thus, the marketing landscape is evolving with machine learning and artificial intelligence (Syam & Kaul, 2021).

In the contemporary era, fierce competition among global organizations underscores the need for artificial intelligence deployment to gain a competitive edge over rivals (Ransbotham et al., 2018). Intelligent solutions to enhance marketing capabilities in a complex business environment are essential and often involve dealing with complexity and extensive information requirements. In this regard, artificial intelligence facilitates quick decision-making by processing significant volumes of data and providing insightful information to key business partners and customers. Consequently, this technology holds the potential to revolutionize conventional business activities significantly (Bag et al., 2021). Indeed, a recent survey conducted by Gartner on business managers revealed that the majority believe artificial intelligence will likely be a key advancement for businesses in the coming years (Shin & Kang, 2022).

Contemporary marketing is increasingly data-driven, automated, and intelligent. The highly focused approach of modern marketing has a direct impact on marketing outcomes (Kumar et al., 2019; Paschen et al., 2019). Additionally, big data analytics in marketing has now become a primary approach for gaining marketing insights (Berger et al., 2019). Advanced and innovative marketing solutions equipped with artificial intelligence can quickly adapt to the changing needs of businesses, providing communications and solution packages that are vital and profitable for stakeholders (Epstein, 2018). Artificial intelligence represents a broad and continuous technological evolution with extensive and far-reaching consequences. Therefore, it is recommended to harness artificial intelligence in digital marketing to foster innovation and improve efficiency, with visible results expected in the future (Haleem et al., 2022).

Many businesses are deploying this technology to address various organizational challenges, with a widespread adoption of artificial intelligence in marketing. This chapter explores the comprehensive application of artificial intelligence in marketing. It begins by defining artificial intelligence and digital marketing, then delves into the importance of the role of artificial intelligence in digital marketing. Artificial intelligence marketing and its applications are discussed in detail, categorized into five sections.

The Importance of Artificial Intelligence in Marketing

In recent years, artificial intelligence (AI) has captured the attention of a wide spectrum of researchers and marketing managers (Davenport et al., 2020). The effectiveness of marketing activities heavily depends on how they are carried out. Organizations must examine industry trends, customers, competitors, and other relevant stakeholders when conducting market research. These data can be collected from various sources such as internal and external reports, social media, etc. However, the analysis of diverse data and intelligent identification from such data requires the deployment of artificial intelligence in organizations. In fact, the proficiency in using AI techniques for market research and marketing decision support can provide organizations with a multidimensional insight, leading to better decision-making (Pietronudo et al., 2022).

The trend of artificial intelligence (AI) in marketing is currently growing and expanding. The significance of this technology lies in increased computational power, lower computational costs, the availability of large datasets, and advances in machine learning algorithms and models. We witness widespread applications of artificial intelligence in various marketing areas today. Many businesses now use this technology to enhance their performance in relation to customers (Davenport et al., 2020; Rust, 2020). As discussed, artificial intelligence has a considerable impact on marketing processes, and the adoption of digitally and AI-based marketing has become a necessity for businesses today.

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