


Chapter 8


Exploring the Synergy of Artificial Intelligence and Big Data Analytics in Enhancing Customer Engagement Strategies: Future Trends, Ethical Implications, and Business Outcomes

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ABSTRACT

This book chapter explores the combined effect of Artificial Intelligence (AI) and Big Data Analytics on customer involvement in marketing. The initial phase is a theoretical investigation into the ways in which these technologies have transformed consumer interaction, with a particular focus on the transition towards customized and interactive encounters. The discussion focuses on the utilization of AI and Big Data in hyper-personalization and predictive analytics, emphasizing the enhancements in customer experience and business success. The report also examines na-

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scant technologies such as natural language processing and the Internet of Things, forecasting their forthcoming impact on consumer interaction methods. The ethical ramifications and privacy issues, specifically in relation to legislative frameworks such as GDPR and CCPA, are thoroughly evaluated. An analysis is conducted on the strategic ramifications of AI and Big Data on sales, customer loyalty, brand reputation, and marketing decision-making.

INTRODUCTION

Through the incorporation of Artificial Intelligence (AI) and Big Data Analytics into marketing tactics, a significant shift has occurred in the area of customer engagement, ushering in a new era of personalised consumer connection. This initial section will attempt to explore the synergy between artificial intelligence and big data analytics, highlighting the influence that both of these technologies have when coupled to improve consumer interaction methods. An emphasis is focused on gaining a grasp of the theoretical frameworks that underpin this integration, the commercial outcomes that are produced as a result of this integration, and the ethical issues that are associated with use of these technologies.

The awareness that artificial intelligence and big data are not merely complementary technologies but are, in fact, synergistic in nature is the fundamental principle that underpins this integration. Big data analytics, which provides a rich tapestry of consumer data, is extremely useful when combined with artificial intelligence (AI), which has the ability to learn and adapt based on patterns in data. This combination makes AI more effective. For the sake of customer engagement, this synergy makes it possible to take a more nuanced and dynamic approach. The strength of Big Data rests in its volume, diversity, and velocity, all of which are efficiently harnessed by AI algorithms to offer deeper insights into customer behaviour and preferences, as Russom (2011) claims. Russom (2011) also suggests that the power of Big Data lies in its velocity.

In addition, this chapter focuses on the revolutionary impact that artificial intelligence and big data have had on consumer interaction strategies. Historically, client engagement has been conceived of as a sequential process that is centred on the establishment of mutually beneficial relationships. On the other hand, as Ngai et al. (2015) point out, the introduction of artificial intelligence and big data has caused this paradigm to change towards a model that is more participatory and immersive. With this model, the necessity of recognising and responding to the individualised requirements and preferences of consumers in real time is emphasised, which ultimately results in an improvement in the entire customer experience.

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