

Chapter 7

The Role of Artificial Intelligence in Neuromarketing in Understanding Consumer Behaviour

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ABSTRACT

The recent decade has witnessed a sea change in different management domains, including human resource management, financial management, supply chain management, marketing, etc. The marketing field is undergoing tremendous growth and development with the application of artificial intelligence and neuromarketing. Neuromarketing is an emerging discipline that focuses on gathering vital and relevant information from brain science, psychology, people's behaviour, marketing and related disciplines, focusing on understanding consumer behaviour in the given context. This empirical study is focused on analysing AI's role in neuromarketing to understand consumers' overall behaviour. The researcher intends to collate the data from primary and secondary sources and analysed it using novel tools like Multilayer preceptor to provide meaningful insights. The analysis reveals that AI in neuromarketing effectively engages with consumers on a real-time basis, personalises products, and harnesses market knowledge for sustainable growth and development.

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INTRODUCTION

The world is witnessing tremendous growth with the advent of novel technologies like machine learning, artificial intelligence, robotics process automation, etc., focused on supporting the management in understanding the overall needs of the business and planning for effective action. In the marketing domain, there is a new field that is gaining more importance: artificial intelligence. The term artificial intelligence is stated as the tool that supports marketers and top management in using advanced algorithms and techniques to analyse critical customer / competitor-related data and information, automate the tasks that take more time, analyse the information and provide meaningful insights so as to support in making informed decisions. It has been further noted that the overall potential of AI in different areas of management is expanding, and organisations are investing in unleashing its potential for sustainable growth and development (Arora & Chandel, M. (2024); Arora (2024); Arora, M. (2024); Chandel & Arora (2024)).

The expanding capabilities of AI in marketing have increased due to its potential to analyse and decipher large volumes of data, understand the patterns and predict them effectively, and support the management in providing scenario analysis for effective decision-making with minimal or no assistance from humans (Arora & Sharma, (2023); Arora, Kumar & Valeri (2023)). The area of neuro-based marketing enables understanding of the overall behaviour of individuals, mainly the consumers, and analyzing their buying decision process and factors influencing them to purchase the product or services, which has supported marketers in offering better products and services (Arora M. (2020). The interlinking of AI and neuromarketing has led to the use of predictive analytics and other aspects to interact with the consumers, understand their experience, create the patterns so that the companies can offer better products and services to the consumers (Bhardwaj, Kaushik, & Arora (2024); Taneja, Shukla & Arora (2024); Malik, Malhan & Arora (2024). (Eds.). (2024)). Camilleri (2023) has stated that the application of AI and neuromarketing has created a significant disruption in the domain, and companies are transforming the process to meet the growing demand and requirements from the consumers. On the other hand, Bakir (2020) also stated that neuromarketing collaborates with different processes like digital marketing, buying behaviour, patterns, etc, of the consumers; these data are gathered and analysed to identify the patterns. Though the term neuromarketing was invented in 1990, its importance and requirements have increased recently with the influence of AI. Different techniques like functional magnetic imaging were applied to understand the brain patterns of the volunteers who have stated the process of buying goods or services (Hawkins, 2022).

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