

Neuromarketing and Metaverse

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By providing insights into how users behave and respond in virtual environments, neuromarketing can help optimize the user experience in the metaverse. Users' brains will process the experience differently when interacting with virtual environments than when interacting with the physical world. Understanding how users react to various aspects of the metaverse, such as virtual advertisements, branding, and product placement, can be aided by neuromarketing. Neuromarketing can help improve the metaverse user experience by measuring brain activity and emotional responses to various elements of the virtual environment using EEG (electroencephalography) or fMRI (functional magnetic resonance imaging). This data can be used to determine which aspects of the metaverse are most engaging and appealing to users, and which may need to be improved. Neuromarketing can also be used to improve the design and placement of virtual advertisements and product placements. Designers and marketers can create more effective and engaging virtual experiences that keep users coming back for more by understanding how the brain responds to these elements. Overall, neuromarketing can help designers and marketers create more effective virtual experiences by providing valuable insights into user behavior and emotional responses in the metaverse. Neuromarketing will become an increasingly important tool for optimizing the user experience and driving engagement in virtual environments as the metaverse grows and evolves.

Keywords: Neuromarketing, Metaverse, Neuroscience, Virtual Environments, Customer Preferences, Product Design

1. Introduction

Understanding customer preferences is essential for businesses to create effective marketing strategies and develop products and services that meet the needs and desires of their target audience (Ahani et al., 2019b; Ahani et al., 2021). By understanding customer preferences, businesses can tailor their products and services to better match the wants and needs of their customers, increasing the likelihood of success (Ahani et al., 2019a; Nilashi et al., 2021; Roudposhti et al., 2018; Yadegaridehkordi et al., 2021).

Neuromarketing is the study of how the brain responds to marketing stimuli. It combines neuroscience, psychology, and marketing to understand how consumers make decisions and how their brains respond to different types of marketing messages (Ariely and Berns, 2010; Hsu, 2017; Perrachione and Perrachione, 2008). Neuromarketing uses various techniques to measure brain activity and physiological responses to marketing stimuli, such as eye tracking, EEG (electroencephalography) (Ahmadi et al.,

2022), fMRI (functional magnetic resonance imaging), and biometric measurements (Nilashi et al., 2020a; Nilashi et al., 2020b). These techniques help researchers understand the emotional and cognitive responses to different types of marketing messages, including ads, packaging, and product design.

The insights gained from neuromarketing research can be used to create more effective marketing campaigns and product designs (Fugate, 2008; Mansor and Isa, 2020). By understanding how the brain processes information and makes decisions, marketers can design messages that are more appealing to consumers and increase the likelihood of them making a purchase. Neuromarketing is a rapidly growing field that has many potential applications, including branding, product design, pricing strategies, and customer experience optimization. However, it is important to note that there are ethical concerns around the use of neuromarketing, particularly around privacy and the potential manipulation of consumers. As such, ethical guidelines and standards have been developed to ensure