Chapter 14
Virtual Reality and Augmented Reality in Financial Services

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ABSTRACT

Virtual and augmented reality systems of modern technology have grasped much attention due to their extraordinary effect on traditional ways of operating business in diverse fields. One of the prone industries to these changes is financial service industry. Thus, this paper pens down the insights about virtual and augmented reality and its role in financial services. The article utilizes library research approach to analyze the information from existing scholarly articles and literature. The study describes the dimensions of virtual and augmented realities and their convincing benefits in financial industry. Some significant practices have been described explaining how AR and VR modernize traditional financial services i.e., analyzing risks, investment portfolios, virtual biddings, and other services. Hence, the research contributes to advancing comprehension of virtual and augmented reality in financial and banking industry. Various financial policymakers, technology providers, bankers, financial experts, and financial firms are the key beneficiaries of the present research paper.

1. INTRODUCTION

With evolving digital technological tools, a pool of demand exists to industrialize updated platforms that not only meet technological needs but also harness industrial productivity and efficiency. Learning about technological history, it can be assumed that new and updated computing platforms advance with every passing decade.

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Hence, there is a dire need to propel and get ready for digital services for tomorrow. One of the future-oriented and by far most extraordinary technological platforms revolves around vision in order to construct riveting augmented experience (Yung & Khoo-Lattimore, 2019). As stated by Mark Zuckerberg, the CEO of Facebook in 2014 after acquiring the Virtual Reality company named: Oculus for USD 2 billion "When you put on their goggles, you enter a completely immersive computer-generated environment, like a game, or a movie scene or a place far away. Today, social networks are about sharing moments. And tomorrow, they'll be about sharing experiences", the world is now moving towards not just materialistic technological advancement but also experiential virtual technologies (Thomson Reuters, 2014). Hence, various technological firms i.e., Oculus, Sony, Samsung, Google, HTC, and Microsoft adopted their biggest projects of virtual and augmented reality into the mass market by the end of 2016.

Augmented Reality

Augmented reality is a hybrid system of real and virtual scenes viewed by users that are generated by digital gadgets which ultimately augments scenes to enhance users' experience and perception of the external world with additional information (Vallino, 2002; Guttentag, 2010; Jung et al., 2015). Recent developments in mobile computing have sparked the creation and growth of AR applications, which take advantage of mobile devices' geolocation capabilities to give users context-sensitive information about their immediate surroundings (Yovcheva et al., 2012). Medical, entertainment, military, engineering design, robotics and telerobotics, manufacturing, maintenance, and repair, as well as consumer designs, are just a few examples of uses for augmented reality (Maad et al., 2007). AR seamlessly incorporates digital information like 3D objects, text, or animations into the user's perspective of the real world using cameras, sensors, and display devices like smartphones or AR glasses. It provides a variety of applications in the gaming and entertainment, healthcare, industrial, and educational fields. Real-time information is provided, productivity is increased, and our perception of and interaction with the world around us is revolutionized by AR, which connects the virtual and actual worlds. Three essential conditions are satisfied by using augmented reality: integrating virtual and actual items, their alignment, and enabling dynamic interactions between them. This is done in a way that the technologies including wearable computing, global positioning systems, and wireless connectivity, location-based computing help provide immersive user experience. Augmented reality apps were initially introduced by the gaming and entertainment businesses, but they are now being used by a few other areas, including marketing, education, communications, healthcare, public safety, education, and tourism. It is feasible to combine the digital visual,