

Chapter 4

Emerging Implications of Metaverse in the Healthcare Domain

Praveen Gujjar J.

 <https://orcid.org/0000-0003-0240-7827>

Jain University (Deemed), India

Guru Prasad M. S.

 <https://orcid.org/0000-0002-1811-9507>

Graphic Era University (Deemed), India

Harold Andrew Patrick

 <https://orcid.org/0009-0004-5349-6799>

Jain University (Deemed), India

M. H. Sharieff

Jain University (Deemed), India

Naveen Kumar H. N.

Vidyavardhaka College of Engineering, India

ABSTRACT

The Metaverse, often referred to as the immersive internet, is widely considered the next significant technological disruption on the horizon, with the potential to reshape clinician-patient interactions, enhance the patient experience, transform innovation and research and development processes. The Metaverse is currently in its developmental phase, and the establishment of a definitive framework is an ongoing endeavor. In recent years, the concept of the Metaverse has gained substantial traction and has evolved into a multifaceted virtual universe with limitless possibilities. This chapter

DOI: 10.4018/979-8-3693-2268-0.ch004

Emerging Implications of Metaverse in the Healthcare Domain

provides a glimpse into the evolving landscape of healthcare, where the Metaverse's immersive and interconnected experiences have the power to revolutionize how we perceive, access, and deliver healthcare services. From virtual clinics and medical simulations to AI-assisted diagnostics, this chapter explores the multifaceted ways in which the Metaverse is reshaping healthcare and creating new opportunities for improved patient outcomes, education, and research.

INTRODUCTION

The intersection of healthcare and cutting-edge technology has entered an era of unprecedented transformation, with the advent of the Metaverse. The Metaverse, often described as the immersive internet, has rapidly ascended as a concept poised to disrupt, enhance, and revolutionize various sectors of society (Kumar, 2022). In the context of healthcare, the implications of the Metaverse are both groundbreaking and multifaceted, offering innovative solutions for patient care, medical education, telemedicine, and therapeutic interventions. This chapter explores the dynamic landscape where the Metaverse and healthcare converge. As we navigate the uncharted territories of the Metaverse, we embark on a journey that promises to redefine how we perceive, access, and deliver healthcare services. Through immersive and interconnected experiences, the Metaverse has the potential to reshape the healthcare domain, influencing patient outcomes, medical education, and research and development processes (Guru, 2023). It is important to note that the Metaverse is still in its evolutionary phase, and a clear and comprehensive definition framework is a work in progress. In this introductory chapter, we set the stage for an in-depth exploration of the emerging implications of the Metaverse in healthcare. We will delve into the transformative potential it holds for clinicians, patients, educators, researchers, and innovators (Kirubasri, 2023). From virtual clinics to AI-assisted diagnostics, from surgical simulations to cross-collaborations transcending the constraints of time and space, the Metaverse opens a world of possibilities that promise to reshape the healthcare landscape as we know it (Kumar HN, 2023).

LITERATURE REVIEW

The metaverse, a hybrid of augmented and virtual reality, is becoming increasingly popular, especially in the medical field, especially after the pandemic increased the use of telemedicine. Known as the “Cardio Verse,” it has the potential to significantly improve medical visits and cardiovascular therapies while also transforming disease education, prevention, and diagnosis. The metaverse has many advan-

13 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/emerging-implications-of-metaverse-in-the-healthcare-domain/353219

Related Content

A Platform for Pervasive Building Monitoring Services Using Wireless Sensor Networks

Asgari (Hamid) Abolghasem (2011). *Pervasive Computing and Communications Design and Deployment: Technologies, Trends and Applications* (pp. 179-206). www.irma-international.org/chapter/platform-pervasive-building-monitoring-services/53789

A Service for Improving the User Experience in WLANs and WPANs

Ricardo Augusto Rabelo Oliveira and Antonio Alfredo F. Loureiro (2010). *Designing Solutions-Based Ubiquitous and Pervasive Computing: New Issues and Trends* (pp. 59-96). www.irma-international.org/chapter/service-improving-user-experience-wlans/42504

Challenges and Opportunities of ICTs for Rural and Remote Areas

Yasuhiko Kawasumi (2013). *Social and Economic Effects of Community Wireless Networks and Infrastructures* (pp. 195-214). www.irma-international.org/chapter/challenges-opportunities-icts-rural-remote/74454

Magnetic Integrated Dual-Tube Forward Converter

HuiQiao Ding and XiaoJie Liu (2017). *International Journal of Advanced Pervasive and Ubiquitous Computing* (pp. 47-80). www.irma-international.org/article/magnetic-integrated-dual-tube-forward-converter/187093

A Modified Landweber Iteration Algorithm using Updated Sensitivity Matrix for Electrical Impedance Tomography

Lifeng Zhang (2013). *International Journal of Advanced Pervasive and Ubiquitous Computing* (pp. 17-29). www.irma-international.org/article/a-modified-landweber-iteration-algorithm-using-updated-sensitivity-matrix-for-electrical-impedance-tomography/92999