

In the World of Metaverse

Researchers around the globe are excited about the idea of the Metaverse as the same is going to impact the way we are living in this world. Metaverse is the latest platform everyone is experimenting with. Experts are describing it as the digital world that exists parallel to the real world. This new technology is going to change the way we perceive reality or alternatively virtuality in the real world. Metaverse is currently a favorite buzzword and despite the data deluge, the concept called ‘Metaverse’ is evolving through emerging Internet technologies. Noted American author Neal Stephenson coined the word ‘Metaverse’ for the first time in his sci-fi novel ‘Snow Crash’ in 1992. He defines the Metaverse as ‘an all-encompassing digital world that exists parallel to the real world’. In real terms, Metaverse is a hyper-realistic shared virtual space where one can have *interactive* and *personalized* avatars and digital assets and can do transactions with Non-Fungible Tokens (NFTs) and Blockchain technology.

Cyberspace is evolving over the years as the power of computing and digitization has progressed at a good speed. The computer wizards have created computer-mediated virtual environments including social media networks, virtual 3D worlds, augmented reality applications, and Non-fungible token games. Such virtual worlds are un-connected with each other but have created some level of digital transformation (Lee, et al, 2021). The creation of the Metaverse has the potential to further facilitate digital transformation in every aspect of our real-world lives. The vision of immersive Internet as a mega, unified, persistent, and shared realm has led to the creation of the Metaverse. Emerging technologies that can make Metaverse a reality include extended reality, 5G, and artificial intelligence applications.

Technology is going to be the enabler in the big bang ‘Metaverse’ proposition in which there will be a transition from the current Internet environment to the world of the

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Metaverse. There are eight enabling technologies – extended reality, user-interactivity (human-computer interaction), artificial intelligence, blockchain, computer vision, Internet of Things (IoT) and Robotics, Edge and Cloud Computing, and future mobile networks. The Metaverse eco-system allows human users to live and play within the context of a shared realm. The six user-centric factors include –Avatar, Content Creation, Virtual Economy, Social Acceptability, Security and Privacy, Trust, and Accountability.

Is it going to replace the real world? That is the fundamental question that we need to ask ourselves as researchers. It looks like a bridge that will connect the real and digital world. This will create and add meaningful ways for people to interact, create and build new economies that have the potential to change the world. The Metaverse is the next step to interacting with the Internet world. Terms like Web 1.0 and Web 2.0 revolves around instant messaging and interactive and information-based web technologies. We see Metaverse as Web 3.0 which is on the doorstep of the digital explosion. The Metaverse belongs to a whole new layer of web technologies and is the primary focus of any Web 3.0 layer is decentralized, personal, and secure technologies (Panda, 2021).

The Metaverse is designed to be part of a larger immersive experience. The old ways of interacting with tied-down devices like a desktop or laptop are now an age-old concept. One can now experience a truly wireless, immersive experience through virtual reality.

Let us look at the domains in which Metaverse is taking its lead indicator advantage. Fashion is an area where we can see the quality application of enabling technologies to support immersive experiences. Designers are using these technologies to showcase their products and designs in an all-new immersive way while making transactions on the go. In the recently concluded New York Fashion Week, the designers used immersive experiences on the catwalk. They could build experiences based on avatar-based virtual clothing or create brands that are native to the world of Metaverse. Gaming is another domain that is growing to become a huge industry hit USD 260 billion by 2025. The gaming on Metaverse allows the players to socialize and interact with others in a global landscape while being able to learn through P2E (Play to Earn) methods. Education is the third most important sector in which we are going to experience more applications of the Metaverse ecosystem. The recent Covid-19 has taken a massive hit on the traditional brick-and-mortar model of learning. Video conferencing apps have taken over the traditional classrooms. The Metaverse is going to enable immersive classrooms, aiding teachers to improve their teaching capabilities and facilitating students to engage, socialize and interact within the virtual environment.



The Metaverse is going to change the way we travel and visit destinations. This is going to alter the travel behavior of a tourist. Travelers search for a huge amount of information before they actually take a tour. This is high involvement and high information search behavior. Deciding a travel destination, choosing the right place to stay, and planning a detailed itinerary is a humongous task. Application of Metaverse can help in a real-time view of the room, and facilities as if you are in the location. It can also help in choosing flights as well as navigating through airports. Metaverse is going to help a tourist to have time travel. The history book can come into reality through characters and incidents. This technology can be used to simulate landmarks, buildings, and events and allow the traveler to experience a particular time in the past. Metaverse can be used to virtually recreate an event or a complete era from the past and let the time traveler get a real-life experience of what it must have been during that period.

The emerging technologies and world of Metaverse are going to be a minefield for researchers. We have a faith that technology and human behavior interface will emerge as a key domain for research in the future. The collaborative research will bring in technologists and behavioral scientists to work together in the areas of user interactivity, user addiction, social acceptability of the virtual interactions, role conflicts between avatars and reals self, security and privacy issues, the role of networks, and status of networking and on the virtual economy. The content creation and imagination mapping will be another additional domain for researchers to work on. The Metaverse is not only building a unique platform on its own for users but also throwing novel and fundamental research questions that the researchers should be excited about.

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Reference

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