Cloud Based AI Augmented Reality Classroom using Met averse

* **Indumathi Pachaiyappan, Arun Kumar Nagalingam**
Department of Computer Science
Adhiyamaan College of Engineering Hosur India
*Corresponding author Email: msdhiyanesh2k1@gmail.com

Abstract: Met averse is the leading technology in the field of Visual Effects which plays an important role in the last decades. The term Met averse is the combination of Augmented Reality, Virtual Reality, and Mixed Reality. The main objective of this research is used to generate the visual effects of the classroom with Augmented Reality using etaverse. This Research work was used to generate an Augmented Reality effect in. The Augment Reality of the classroom can be implemented in any school or college with 3D Effects to make an interactive system. This research work was used to design the structure of the classroom of our college using met averse. This research work is an exploration of augmented reality with met averse being effective and efficient. The
Keywords: Metaverse, Augment Reality, Virtual Reality, Mixed Reality classroom

1. Introduction

Met averse, a combination of the prefix "meta" (implying transcending) with the word "universe", describes a hypothetical synthetic environment linked to the physical world. The word 'met averse' was first coined in a piece of speculative fiction named Snow Crash, written by Neal Stephenson in 1992. Stephenson defines the met averse as a massive virtual environment parallel to the physical users interacting through digital avatars. This is the first appearance, the met averse as a computer generated universe has been defined through vastly diversified concepts, such as live blogging active space in virtuality, embodied internet/ spatial Internet, a mirror world, and an omnivores a venue of simulation and collaboration. Augmented reality starts with a camera-equipped device such as a Smartphone, a tablet, or smart glasses loaded with AR software. When a user points to the device and looks at an object, the software recognizes it through computer vision technology, which analyses the video stream. The twin then collects information from the product, business systems, and external sources to reflect the product's current reality. It is the vehicle through which the AR software accurately places and scales up-to-date information on the object. Augmented reality (AR) adds digital content into a live camera feed, making that digital content look as if it is part of the physical world around you.

2. Literature Survey

Marini, et.al (2022) explained about Augmented Reality technology allows students to experience learning with objects seen in person. Decide the efficaciousness of mobile augmented reality learning media with met averse on improving student learning outcomes in science classes. The sample was taken using the solving formula until it obtained 75 samples of fifth-grade students. Employed experimental research techniques and a single group per pre-test and post-test. The data analysis performed was an inferential analysis with a t-test. To the findings, using that met averse application positively impacts students' learning outcomes. Students can use the Met adverse app to see better learning outcomes. Students are also more interested in learning and can easily understand and discover new knowledge. Students find it more fun to learn using the Met adverse app, which is a mobile augmented reality. Robert V. Kozinets et, al (2022) immersive technologies gain wider adoption, contemporary service researchers are tasked with studying their service experiences in ways that preserve and attend to their holistic and human characteristics. The purpose of this paper is to provide service researchers with a new qualitative approach to studying immersive technologies. Kathryn MacCallum et.al (2019) describes Augmented Reality (AR) by assuming that virtual content is intermediated between the viewer and the real world. The links between an overlay and the physical world may be weak or strong, and the roles of location, collaboration, and mobility may differ widely between AR experiences. The diversity of options within the AR space means that educators need to be guided in understanding how AR might be used in the classroom and impact student learning. We report on a study involving teachers. The participants were allowed to create mobile AR experiences using Met averse. AR tool and were invited to respond to a survey designed to capture the responses to its educational potential. Enrico Vanzetti et.al (2021) proposed virtual commerce applies immersive technology, augmented reality, and virtual reality into e commerce to shift consumer perception from 2D product catalogs to 3D immersive virtual spaces. The alignment of application design paradigms and the factors influencing consumer behavior is paramount to promoting the purchase of products and services. The question of their relationship needs to be answered, together with the possible improvement of application design. A systematic literature review approach to synthesize research on virtual commerce from both application design and consumer behavior research, considering the promotion of purchase in virtual commerce settings. Influential factors to purchase and preeminent design artifacts were identified. The research gaps were discovered by mapping the design artifacts to the influential factors, and future research opportunities on the synergy of these two research directions. System design: In system design, there are three parts which

are Virtual Reality, Augmented Reality, and Mixed Reality. This Project can be helpful in the way to meet people digitally and interact with them in an Entertainment way such as meeting a person at a long distance. Augmented Reality (AR) could be a technology that blends the digital and real worlds. It uses laptop vision to acknowledge real-world surfaces and object victimization technologies like seeing, plane detection, automatic face recognition, and movement training, among others. The pc then overlays computer-generated knowledge like graphics, sounds, images, and messages on these antecedent recognized planes.

FIGURE 1. Augmented Reality

AR improves the interaction between digital merchandise whereas conjointly permitting North American nations to watch our real-world surroundings during this approach. The following Figure 1 presents Augmented Reality. Virtual Reality (VR) Virtual Reality (VR) is a science that substitutes one's imagination and prescient of the bodily world with a digitally produced scene with the use of software programs and headgear gadgets. While carrying full-coverage headsets, you are reduced from your environment and the genuine world. Computer-generated digital surroundings are mirrored using the LCD monitors inner the lenses of these headset devices, and your perspective is replaced.

FIGURE 2. Virtual Reality

The devices are typically linked to a PC or Smartphone that shows digital images as shown in Figure 2. These photos can be genuine duplicates of real-world areas or areas from a completely fictional universe. Mixed Reality: A hybrid of augmented truth and digital truth as proven in Figure 1. It's additionally recognized as a Hybrid Reality because it comprises each real-world and digital aspect. While MR is chiefly technological know-how for combining the bodily and digital worlds, the most attractive science is the lifelike interplay between customers and digital items.

FIGURE 3. Mixed Reality

Proposed work: In our Reference paper, we took our college as a Sample Added it to an Augmented Reality Platform and Extracted Models to Connect People across the Internet to our College's Class Room. This can be a Futuristic Way of leveling the classes interactively. Each student can connect to the AR Augmented Reality World with the help of an Oculus or a Pc with an Internet connection. The Proposed work for our Adhiyamaan College of engineering is described in Figure 4

FIGURE 4. Proposed Work

Augmented Reality (AR) in education within the greater context of immersive virtual learning environments. The conventional process of learning in Malaysia based on the subject of education is truly vital to the establishment of a developed and knowledgeable society. AR system development the appropriate equipment or devices need to be considered to ensure the system implementation successfully. The element of devices which is consist of input devices such as a computer or laptop and webcam, a monitor or screen as an output, and AR tools software to generate objects to the real environment when the marker is shown to the webcam.
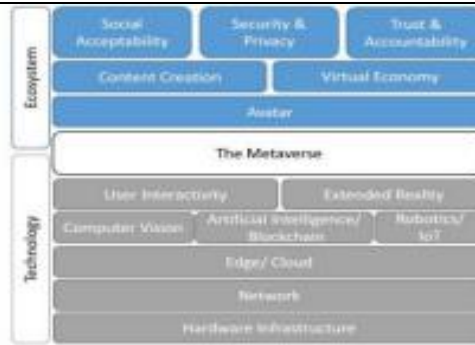
FIGURE 5. Met averse Concepts

Experimental and Analysis 5G networks will dramatically improve bandwidth while reducing network contention and latency. 6G will increases speeds by yet another order of magnitude. The following Figure 5 represents the innovation model using Met averse.

FIGURE 6. Innovated Model – Adhiyamaan College of Engineering

Analysis: we consider the met averse as a virtual environment blending physical and digital, facilitated by the convergence between the Internet and Web technologies, and Extended Reality (XR). The met averse scene in Snow Crash projects the duality of the real world and a copy of digital environments. In the met averse, all individual users own their respective avatars, in analogy to the user's physical self, to experience an alternate life in virtuality that is a metaphor for the user's real world. Challenges and Future Scopes: AR technology faces a problem relating to compatibility with the overall scenario. Security and privacy are also major concerns in the AR industry addition to some technical software and hardware limitations in each game design, is an ongoing challenge in AR gaming It has tremendous potential in areas, such as education, medicine, military, construction, automobile, travel, retail, art, and architecture AR is a futuristic technology that will change and reshape many business strategies developed by organizations. With an increase in market competition, customers trust only companies who offer good quality products and extraordinary service it is also conjectured that the mobile AR technology, which will rise in the coming years, would lead to greater social acceptance. As many people are familiar with operating mobile phones, it would be easier for them to adapt to new technology. The uniform distribution of target audiences among the design team, the project management team, and on-site personnel reflects integration being the essential purpose of AR technologies. It is also predicted that next-generation mobile AR systems would have context-aware and location-aware applications.

3.   Conclusion

The results of this research cannot be generalized, but they could be a solid basis for further research in the field with a larger number of participants. The current work is mainly aimed at studying teachers' opinions and investigating the factors that can affect the implementation of Augmented Reality applications in school settings, to contribute to the more effective use of technology in education. Teachers play a central role in educational actions and know in depth the field of education. Each different specialty approaches an issue, like AR application development, from a different point of view, contributing to a more holistic approach. Results show that the most important factors for the effective use of AR technology in education are the enhancement of collaboration among teachers of different specialties and a more flexible course schedule. The contribution of educational institutions and cultural institutions to the diffusion of technology, the need for more actions, and the benefits of educational visits are highlighted.

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