Create Platform For The User To Share Virtual World Using Mixed Reality

Poonam Papal¹, Shivani Mane², Vikas Kakade³, Maya Thomabare⁴, Prof. B.B.Bhusare⁵

^{1, 2, 3, 4, 5} Dept of Computer Engineering ^{1, 2, 3, 4, 5} Navsahyadri Education Society's Group of Institutions Pune

Abstract- Augmented Reality and Virtual Reality are one of the booming technologies in the current era. Many fields are changing landscapes because of AR/VR changing definition of media delivery and providing new ways for users to interact. Augmented reality provides us ways to interact with augmented object i.e. virtual objects on a physical surface where screen or display channel is between.

Our project focuses on creating augmented reality based platform which will allow users to share information with each other in virtual worlds object.

Keywords- augmented reality, cloud, virtual worlds.

I. INTRODUCTION

Computers have become an inseparable part of our life the way we interact without a computer is changing day by day. Often the term virtual world is used with computer gaming and open world application these applications provide 3d space to user in the computer where he can explore the virtual world using input devices like keyboard or gaming console. The term Augmented Reality (AR) is used to describe a combination of technologies that enable real-time mixing of computer-generated content with a live video display. AR is based on techniques developed in VR and interacts not only with a virtual world but has a degree of interdependence with the real world. As stated in hugues 11, "augmenting" reality is meaningless in itself. However, this term makes sense as soon as we refocus on the human being and on his perception of the world. Reality cannot be increased but its perceptions can be. We will, however, keep the term of Augmented Reality even if we understand it as an "increased perception of reality".

Traditionally we use papers, notebooks, and files to store information. Digitization of information has not transformed fully we still rely on papers i.e. instruction manuals datasheets. There are many limitations to using papers as they can be used to visualize static data but in today's era where information is updating every day user has to get updated using devices like mobiles computer with internet. but the way we visualize the data has been always concern as viewing data on computer doesn't feel real or

relevant as many of the information is connected to the real world locations but when it comes to viewing that information with devices we cannot find reference well as images can only show 2d space of the place but we can't explore or get idea how really the place.

II. RELATEDWORKS

The term virtual reality is commonly used by the popular media to describe imaginary worlds that only exist in computers and our minds. However, let us more precisely define the term. Virtual is defined to be being in essence or effect but not in fact. More recently defined the full term virtual reality is to be an artificial environment which is experienced through sensory stimuli (as sights and sounds) provided by a computer and in which one's actions partially determine what happens in the environment. A good virtual reality system will allow users to physically walk around objects and touch those objects as if they were real. Ivan Sutherland, the creator of one of the world's first virtual reality systems stated". The ultimate display would, of course, be a room within which the computer can control the existence of matter. A chair displayed in such a room would be good enough to sit in. Handcuffs displayed in such a room would be confining, and a bullet displayed in such a room would be fatal" sutherland68.

Traditionally we use papers, notebooks, and files to store information. Digitization of information has not transformed fully we still rely on papers i.e. instruction manuals datasheets. There are many limitations to using papers as they can be used to visualize static data but in today's era where information is updating every day user has to get updated using devices like mobiles computer with internet. Many of the basic concepts of AR have been used in movies and science fiction at least as far back as movies like The Terminator (1984) and Robocop (1987). For educational purpose Igpaw: Intramuros app has been developed that describes the design of an AR game for Philippine history.AR is also used to preserve space related historical elements. Seattle's Museum of Flight has been created augmented-reality based application that shows a full-scale holographic

Page | 185 www.ijsart.com

model of the interior of the first 737 jet that was first used as a Boeing flight test aircraft in 1974

III. PROPOSEDSYSTEM

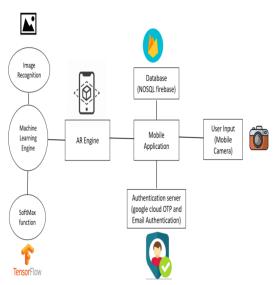


Fig1: Proposed System

Project mainly deals with the web application and the android application. It creates the support for mixed reality on cloud environment. Cloud computing environment may help to improving the process of mixed realty.

Stage1: Image Recognition

In stage1 image processing is done with the help of imagenet dataset where it interacts with tensor flow.

Stage2: Mobile Application

Mobile Application is build where the user has to register with phone no once register the user gets the OTP for verification

Stage 3: User Input

User will be able to see the message which is send by other user. Text message will be send to the first user by the GPS by measuring his longitude and latitude.

IV. CONCLUSION

This research presented an approach to implement augmented reality and virtual reality using neural networks by tensor flow which is popularly used for virtual reality technology we solve issues Using neural network to find features and recognize objects and sprit placement combined with gps coordinates

REFERENCES

- [1] https://www.researchgate.net/publication/33275791_ Sharing_And_Augmented_Emotion_In_Collaborative_Mixed_Reality by Jonathon D.hart,Thammathip Piumsomboon, Gun Lee, Mark Billinghurt "" IEEE 2018
- [2] https://ieeexplore.ieee.org/document/7947054 Jens Naber,Christian Krupitzer,Christian Becker "Transferring an Interactive Display Service to the Virtual Reality"
- [3] Jens Naber, Christian Krupitzer, Christian Becker "Transferring an Interactive Display Service to the Virtual Reality"©2016 IEEE
 G. Tacks, M. El Choubassi, Y. Wu, and I. Kozintsev, "3D mobile augmented reality in urban scenes," in Proc. IEEE Int. Conf. Multimedia Expo (ICME), 2011, pp. 1–4.
- [4] Martin Duggan, Kieran Flesk, Jim Duggan, Enda Howley, Enda Barrett A Reinforcement Learning Approach for Dynamic Selection of Virtual Machines in Cloud Data Centres National University Of National University Of Ireland, Galway, pp. 178-183, 2016.
- [5] R. T. Azuma, A Survey Of Augmented Reality, August 1997, MIT Press

Page | 186 www.ijsart.com