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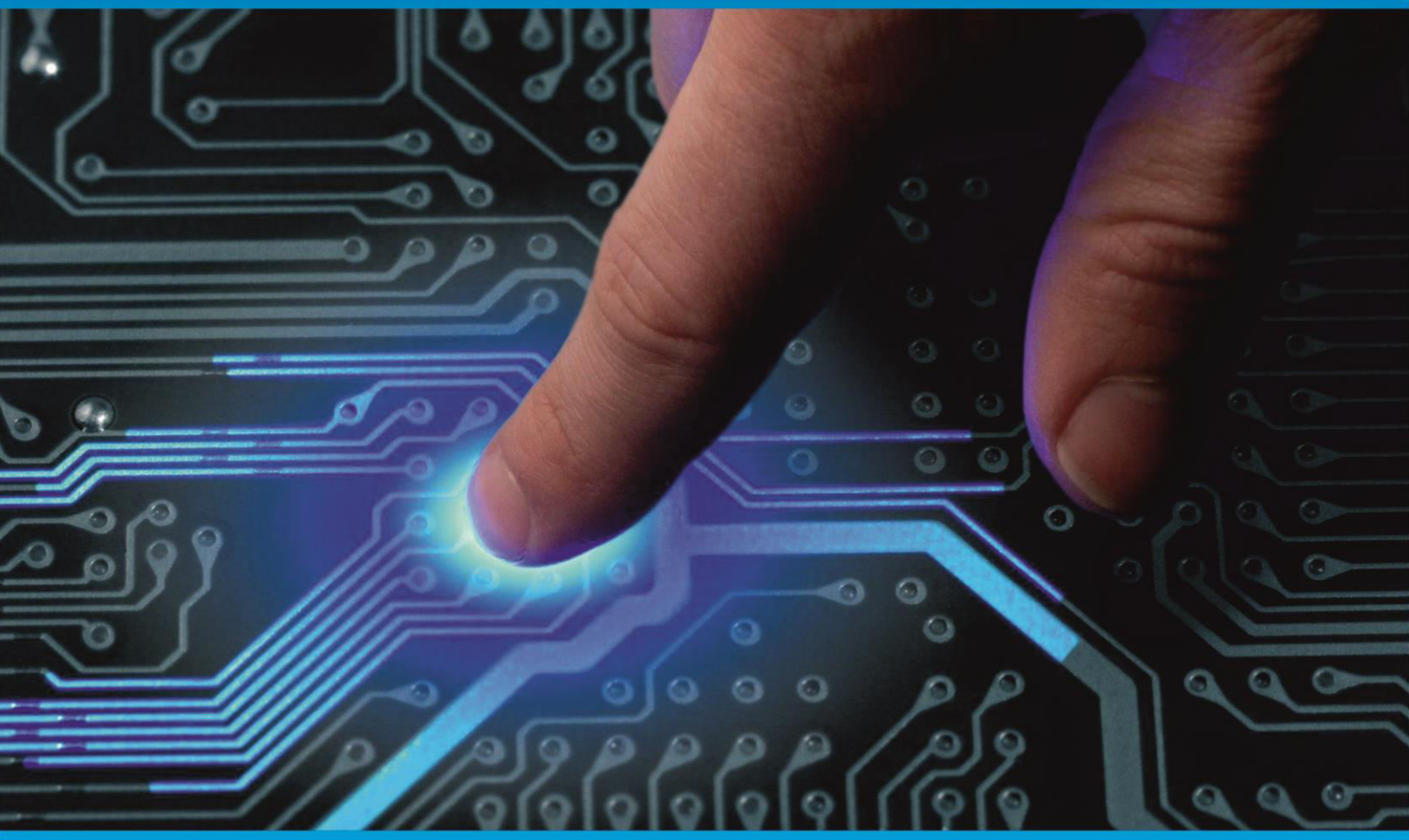

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Augmented Reality in Education

Yashwant Gawkar[1], Hiten Lilaramani[2], Aniket More[3], Hasib Shaikh[4]

U.G Student, Dept of Computer Engineering, Excelsior Education K.C College of Engineering, Mumbai University, India[1,2,3]

Assistance Professor, Dept of Computer Engineering, Excelsior Education K.C College of Engineering, Mumbai University, India[4]

ABSTRACT: In 21st century the Augmented reality is the most enhanced technology in the world it is evolving day by day in many fieldsfrom them education is one.Our conventional education system is only about bookish knowledge and it does not influence much tostudents.This paper is attempt to provide how to make use of augmented reality in the field of education to make study interactive for this certain algorithm is to be used this proposed algorithm is used to identify augmented reality marker point and by localizing them with front of media.The algorithm depends on image classification model

KEYWORDS: Image classification, augmented reality marker point

I. INTRODUCTION

In today's world Augmented reality is the top trending technology.The Augmented reality is enhanced with the rapid changing of the mobile technologies.The Augmented reality is basicallyto impose an object on any image or a surface based on this the augmented reality is classified on two types Marker based augmented reality and Markerless augmented reality.In the Marker based augmented reality picks any augmented marker point through this point augment an object.In the Marker less augmented reality we detect any plane surface for augmenting an object. The popular example of Augmented reality is Pokemon Go this is a game which augments Pokemon on their respective given location.Talking about Augmented reality in the field of education Nowadays, the education is not giving proper conceptual clarity. The introduction of AR in the field of education can make classroom more interactive.
Now talking about behind this concept of how to used AR in the classrooms.The main algorithm behind this is based on Image classifier model this model have to be made by collecting images of object and apply the Convolutional neural network algorithm to differentiate their properties based on their properties we classify an image.Based on image choose an Augmented marker point to augments an object.

II. LITERATURE SURVEY

Sr.No.	Title of Paper	Author name	Innovation/Technology Developed/Result	Drawback/Limitation
1	The research and application of augmented reality	Pu ZHEN, Ting WANG	1. Understood the difference between AR and VR.the basic application of AR in the field of television entertainment tourism and soon.	It does not show the insight of how AR application work

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2	Marker Based Augmented Reality	Krishi Sanskriti	Understood the difference between Marker Based and Marker less Augmented Reality and also learned the Architecture Block diagram of Marker based AR which will used to combine virtual object with real world environment which can be used in real worldapplication	It talks about basic augmented reality without machine learning
3	Research on Augmented Reality in Education	Nor FarhahSaidin	Understood the application of AR in the field of Education through the use of smartphones.	It not clearly talk about how augmented reality work to detect images and display augmented object
4	Augmented Reality Using Vuforia for Marketing Residence	Monica Hidajat	Understood the application of Vuforia and also the practical demonstration Of Vuforia	Have shown the use of machine learning in vuforia

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5	Understanding of a convolutional neural network	Saad ALBAWI , Tareq Abed MOHAMME D	Understood the importance of convolutional Neural network working and how it is used to classify the image	It does not show how to apply convolutional neural network to audio
6	Augmentation on Synthetic Images for Transfer Learning using DeepCNNs	Jonti Talukdar, Ayon Biswas, Sanchit Gupta	Understood the working of data augmentation and It plays an important role with an Convolutional neural network	It doesn't work in dynamic image.
7	Building your kingdom Imitation Learning for a Custom Gameplay Using Unity ML-agents	Kening Zhu, Artur Lugmayr, Xiaojuan Ma.	Understood the usage and working of Unity ML-agents by creating a imitation learning model of a custom game.	It don't have the prebuild dataset needed for image classification.
8.	Video Game Description Language Environment for Unity Machine Learning Agents	Mads Johansen, Martin Pichlmair and Sebastian Risi	Here we learn how to use tensorflow sharp plugin for unity and to use various tensorflow tools for Augmented reality.	It don't have connections with the unity Augmented reality program and don't have various AR objects needed as output.

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9.	Machine Learning Schemes in Augmented Reality for Features Detection	GhinaDandachi, Ammar Assoum	Here we understand various different types and extraction and classifications accuracies on Image and Video based ML models.	It don't have any machine learning model connected to it for image classification.
10.	Data augmentation for improving deep learning in image classification problem	Agnieszka Mikołajczyk, MichałGrocho wski	They have focused on Convolutional Neural Networks (CNN) ,which is the main tool used for the image analysis and classification purposes.	Dataset in very wide range

III. CONCLUSION

Our scope being education for pre-primary students and for students that age education with entertainment can put a lasting affect which can also enlighten curiosity about various technologies in them.
Many available programs doesn't allow for tensorflow tools to work with Unity but by using theTensorFlowSharp plugin and other various configurations we can use trained model in Unity.
With the help of augmented reality, a student can have better understanding of concepts using Unity, TensorFlowSharp and deep learning technologies.
So, simply by this project, the main achievement is that we showed that we can use both Augmented Reality with a user trained machine learning model hence achieve many different goals.

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