

Exploration Using Augmented and Virtual Reality

Submitted in partial fulfilment of the requirements

of the degree of

Bachelor of Engineering

by

Vaibhav Goyal (19)

Radhika Raghuwanshi (54)

Rohini Yedelli (77)



under the guidance of

Supervisor:

Mrs Smita Jangale

Department of Information Technology

Vivekanand Education Society's Institute of Technology

2017-18



Vivekanand Education Society's Institute of Technology

Since 1962

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Department of Information Technology

CERTIFICATE

This is to certify that **Mr Vaibhav Goyal, Ms Radhika Raghuwanshi and Ms Rohini Yedelli** of Fourth Year Information Technology studying under the University of Mumbai have satisfactorily presented the project entitled **Exploration Using Augmented and Virtual Reality** as a part of the PROJECT-II for Semester-VIII under the guidance of **Mrs Smita Jangale** in the year 2017-2018.

Date: 23/04/2018

Mrs Shalu Chopra
Head of Department

Mrs Smita Jangale
Supervisor/Guide

Project Report Approval

For

B.E (Information Technology)

This project report entitled **Exploration Using Augmented and Virtual Reality** by **Vaibhav Goyal, Radhika Raghuwanshi** and **Rohini Yedelli** is approved for the degree of **Information Technology**

Internal Examiner

External Examiner

Head of the Department

Principal

Date: 23 rd. April, 2018

Place: Mumbai

Declaration

We declare that this written submission represents our ideas in our own words and where others' ideas or words have been included, we have adequately cited and referenced the original sources. We also declare that we have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in our submission. We understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

(Signature)
Vaibhav Goyal (Roll No: 19)

(Signature)
Radhika Raghuwanshi (Roll No: 54)

(Signature)
Rohini Yedelli (Roll No: 77)

Date: 23 rd. April, 2018

Place: Mumbai



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Abstract

In this advanced era of technology, people believe what they see and experience through their eyes. Virtual Reality is a computer simulated reality which replicates a real environment, and simulate a user's physical presence in this environment while Augmented Reality blurs the line between what's real and what's computer-generated by enhancing what we see, hear and feel. This alone showcases the potential of Virtual and Augmented Reality in fields of gaming, e-commerce, tourism, education etc. to provide real life experiences.

The proposed android application “Exploration” will be a perfect blend of virtual and augmented reality. “Exploration” will have various functionalities like providing 3D view of different tourist places objects around you in the real world and also help students to view 3D complex structure in real world which would be difficult to imagine. The main aim of “Exploration” would be to provide a more immersive and interactive real environment to everyone.

Keywords: Augmented Reality, Virtual Reality, Target, Recognition based AR, Virtual Environment, Marker, Vuforia, and Unity.