**ATHARVA EDUCATIONAL TRUST**

**ATHARVA COLLEGE OF ENGINEERING**

**MALAD, MUMBAI**

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A MINI PROJECT REPORT ON

**“Sketch using AR”**

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UNDER THE GUIDANCE OF:

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**(2018-2019)**

# CERTIFICATE

This is to certify that the project entitled **“Trace AR”** is a bonafide work of **Ajaykumar Kushwaha(41), Rishikesh Nanaware(52) , Damini Pandare(57**) submitted to the University of Mumbai in partial fulfillment of the requirement for the award of the degree of “**TEIT”** .

(GUIDE SIGNATURE) (HOD SIGNATURE)

# Dissertation Approval Certificate

This project report entitled websiteon**Trace AR**byAjaykumar Kushwaha,Rishikesh Nanaware,DaminiPandareisapproved for the degree of Bachelorof Engineeringin Information Technology.

Examiners

1.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name:-

Date:-

Place:-

# Declaration

I declare that this written submission represents my ideas in my own words and where others' ideas or words have been included, I have adequately cited and referenced the original sources. I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in my submission. I 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.

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**Abstract**

TraceAR is a fully-fledged tool for teaching drawing using augmented reality, machine learning, and neural networks. The app puts virtual images on paper/wall to let you trace drawings from your phone.

Sketching is a method used in user-centered design to visualize ﬁrst drafts of a product. In corporate environments, sketching is often employed in ideation workshops with participants of various disciplines including end users. The aim of sketching is to promote communication and create a better understanding between stakeholders. However, participants are sometimes reluctant to engage in the activity for fear of inferior drawing skills. In order to counteract this phenomenon, I designed a mixed reality application that supports users in sketching, particularly in workshop settings.

**Acknowledgements**

I have great pleasure in presenting the report on Trace AR. I take this opportunity to express my sincere thanks towards my guide Prof. Nileema Pathak for providing the technical guidelines and the suggestions regarding line of this work. I would like to express my gratitude towards his constant encouragement, support and guidance throughout the development of the project.

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**INDEX**

1. INTRODUCTION
   1. Introduction
   2. Problem Statement
   3. Scope and Aim
   4. Objective
2. REQUIREMENTS
   1. Hardware Requirements
   2. Software Requirements
3. SYSTEM IMPLEMENTATION
   1. Code
   2. Website snap
4. CONCLUSION
5. REFERENCES

**LIST OF FIGURES**

3.2.1. 2

3.2.2 3

3.2.3 4

**Chapter I**

**1.1. Introduction**

TraceAR is for those who have always wanted but have never been able to draw.Also, the app is to be designed for professional artists as a simple and convenient way to trace sketches onto any desired surface (e.g., canvas, wall, etc.).

The application of Augmented Reality in Architecture is promising as it provides the possibility to see design proposals in the real context. Reviewing of architecture design has been demonstrated successfully. However, the ultimate task will be to create architectural design within augmented environments. Designing is a complex activity, which may be examined as sequential phases of simpler activities. One of the most interesting stages of the design is the conceptual phase at which point a designer may be concerned with formal investigation of possible solutions; this phase benefits from the use of a variety of media to explore and discuss a design.

**1.2. Problem Statement:**

To overcome with these problems,I have designed a Mobile application to put virtual images on paper/wall to let you trace drawings from your phone and let you participate in the activities without fear for inferior drawing skills.

**1.3. Scope and Aim:**

* **SCOPE:**
* This system guides user to draw sketches using augmented reality and convolution neural network. Hence Leading to overall growth of network.
* This system is also very cost efficient and user-friendly as most of the work is done on smart phone and requires less power supply.
* **AIM**: The TraceAR aims to match technology and art to bring you a better way to express yourself by drawing using augmented reality.

**1.4. Objective**

To unite artists, creators, and innovators who are exploring new ways of taking their art to the next level using augmented reality.

**Chapter II**

**2.1. Hardware Requirements:**

1. SmartPhone
2. Architecture x86
3. Microsoft HoloLens

**2.2. Software Requirements:**

1. Android 5.0 and up
2. ARKit 2.0
3. ARCore
4. OpenCV

**Chapter III**

**3.1. Code**

# 3.2. Website snaps

**Chapter IV**

**4. Conclusion:**

Taking into account the Upcoming technological advancements, we conclude that the TraceAR will offer professional artists, creators, innovators and naïve sketcher a new learning insight with augmented reality promoting their designing and creative skills.

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