

# **USE OF ANDROID-BASED AUGMENTED REALITY TECHNOLOGY AS A LEARNING MEDIA IN INTRODUCTION TO BASIC ELECTRONIC COMPONENTS**

**AFRI FAJAR KUSTRIANUGRAHA**

*Informatics Study Program, Faculty of Science &  
Technology*

*University of Technology Yogyakarta*

*Jl. Ringroad Utara Jombor Sleman*

*YogyakartaE-mail:*

*[afrifajar6@gmail.com](mailto:afrifajar6@gmail.com)*

## **ABSTRACT**

*Technological advances in the field of electronics require students and teachers to understand and recognize components related to electronics. Currently, explanations and learning materials for electronic components still rely on books or training modules which are basically difficult to understand. As a result, students feel bored and ultimately fail to achieve the expected competencies. The aim of this research is to create and build a mobile application for Android, which aims to design an Android-based application that utilizes Augmented Reality to introduce basic electronic components using a marker-based tracking method. This makes learning to introduce electronic components more interesting. This research uses several tools such as Unity, Blender, Vuforia, and ARToolkit. The testing method uses black box testing to show that the features of the application are free from errors, testing Android devices and testing users. This application can be classified as having undergone testing in the "Good" category, although there are several limitations in certain aspects, namely the marker tracking distance. Thus, the test results show that this application is worthy of further development and can make it easier for students to learn the basics of electronic components through three-dimensional models.*