

# ***CLASSIFY OBJECTS WITH VOICE OUTPUT USING MOBILENETV1***

**Muhammad Bacharuddin Ilman**

**Study Program of Informatics Engineering**

**Majoring of Information Technology**

## ***ABSTRACT***

*Language is a means of communication between members of society in the form of sound symbols produced by human speech devices. Arabic is a science that develops oral and written communication skills. Arabic taught in school's functions as a language of religion and science, in addition to being a means of communication. However, learning Arabic is very difficult for some students and students who are learning for the first time, such as the pronunciation of readings that must be correct from consonants and vowels. To help in dealing with this problem, the author created an application to identify objects with output in the form of text and vowels in Arabic. In this study, the author utilizes MobileNetV1 model technology in recognizing objects in Arabic. The test results of the object classification model show significant variations in the performance of each object class. Although some objects such as "Eraser" and "Fountain" showed excellent performance with high F1 scores of 88.4% and 87.8%, there were some objects that showed unbalanced precision and recall results. For example, the "Ruler" object has a precision of 77.8% and a recall of 70.0%, while "Rautan" has a precision of 77.8% and a recall of 70.0%.*

**Keywords:** *Convolutional Neural Network, MobileNetV1, Object Classification*