

# ***DETECTION OF MASK USE AND MEASURING BODY TEMPERATURE FOR AUTOMATIC DOOR SYSTEMS BASED ON DEEP LEARNING WITH MOBILENETV2 ALGORITHM***

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## ***ABSTRACT***

*The COVID-19 (Corona Virus Disease) pandemic has had a major impact on the people of Indonesia and even throughout the world. The Ministry of Health (Ministry of Health) gives an appeal to implement and regulate health protocols to minimize exposure caused by the COVID-19 virus. One of the health protocols is the use of masks when doing activities both indoors and outdoors. This is an opportunity for researchers to take advantage of technology and contribute to the fight against the spread of COVID-19, such as the creation of applications to detect the use of masks and body temperature. In this research is to make tools and applications to detect objects contained in the preview image using a mask or not using a mask, detect body temperature, perform facial recognition, and open and close doorstops automatically. Training data collection was carried out by taking data from the kaggle site totaling 3833 image data consisting of 1915 image data using masks and 1918 image data not using masks. The results obtained are based on trials conducted on 10 people contained in the training data and 10 people who were not included in the training data. The architecture of MobileNetV2 and Haar Cascade Classifier is used in this study and implemented in the Python programming language with an accuracy level of detecting the use of masks from the experimental data obtained is 95%.*

**Keywords:** *Deep Learning, Face Mask, MobileNetV2, Body Temperature, Automatic Doorstop.*