ABSTRACT

More and more various kinds of diseases are emerging in the world, one of which is Coronavirus Disease 2019 or in other words, the Covid-19 virus, an infectious disease caused by SARS-CoV-2. Transmission of this virus can quickly spread by means of fluids that come from the nose and mouth when coughing, sneezing or when talking, because it is expected that everyone must protect themselves and take care of themselves with various health protocols, one of which is to use a mask. when doing activities outside the home. The Indonesian government makes rules for the use of face masks so that it becomes an obligation and a system is needed to detect the use of face masks so that people are more disciplined and care about the use of face masks. In this final project research creates a system that has the aim of detecting whether the person in front of the camera is wearing a mask or not in real time. The design of the mask detection system is carried out using the Convolutional Neural Network (CNN) method and the MobileNetV2 architecture and SSD Resnet10 for face detection. The training and testing of the research model was carried out at the Google Collaboratory which then the results from the training model were converted into h5 format and then imported into Spyder Software to be implemented into the system. The results of the test resulted in an accuracy of 0.992, recall of 0.994, precision of 0.990, f1-score of 0.992. Factors that affect the difference in the test results include the specifications of the camera used for testing, the motif of the mask used, the level of lighting and the distance during testing.

***Keywords**: Covid 19, Deep Learning, CNN, MobilenetV2, Google Collaboratory, SSD Resnet10.*