

## ABSTRACT

*The COVID-19 virus can be spread through splashes or droplets when sneezing or coughing between humans. Therefore the use of masks is very important to carry out daily activities when leaving the house. Disciplinary efforts carried out by examiners regarding the use of masks still use manual methods, so that it requires large human resources to carry out inspections on the use of masks. This inspection has limitations, one of which is the limited manpower because manual inspection cannot be carried out every time. Based on the limitations that exist in efforts to prevent transmission of COVID-19, especially in the use of masks, a mask detection system technology is needed to support the inspection staff. By using a webcam camera and implementing it using computer vision techniques and the Convolutional Neural Network (CNN) model architecture, the mask detection system can be designed to categorize it into 2 classes, namely "with\_mask" and "without\_mask" based on the results of human facial image capture. In this study, computer vision functions as an image data processor and the CNN architecture is used as a classifier or classifier for images that have been processed. Using a dataset totaling 853 which is then preprocessed the data so that it becomes 5,988 image data. Divided into 2 groups of training data by 75% or 4792 image data and test data by 25% or 1196 image data of the total dataset, then a CNN model can be trained to be able to classify facial objects with the resulting accuracy reaching a value of 97%.*

**Keywords:** *Technology, Mask Detection, Computer Vision, Neural Network, Classification.*