Abstract

The COVID-19 pandemic began in China, more specifically the city of Wuhan in 2019. The Indonesian government implemented policies to stop the transmission of this virus, including the use of masks in public spaces. So far, the use of masks has been checked manually by officers. This method has many limitations, one of which is difficult to do at various times and places, so it is necessary to create a computer vision-based mask detection system with the aim of covering the deficiencies of traditional mask detection. This study proposes the creation of a mask detection system using the You Only Look Once version 5 (YOLOv5) algorithm as a face detection method and the Convolutional Neural Network (CNN) as a classification method for mask use. The results of the classification of using masks in the best scenario get an f1-score of 98%, in data testing get an accuracy of 97.88%.

Keywords: mask detection, deep learning, CNN, digital image, YOLOv5