

ABSTRACT

At this timen we are hit by a virus called covid-19 or known as coronavirus. Wemust prevent this virus from spreading either in this country or in the world by complying with health protocols, wearing masks and one of them is maintaining distance. The impact that can occur when we are exposed to Covid-19 can cause death. Thecharacteristics of people exposed to COVID-19 will be high fever, flu, cough and loss of sense of taste and smell. Therefore, we must maintain social distance wherever we are. This virus can spread through touch, so that there is not a lot of touching that happens we have to do what is called social distancing. The benefit of keeping our distance or social distancing is that we can reduce the spread of COVID-19 in ourcountry.

From these problems, this research detects human images when there is a crowd of people. This detection is used to determine how many humans are detected in the image. To perform the human detection process using the Histogram of Oriented Gradients (HOG) method. The HOG method is used as a form extraction in humans as the value of the training data. There are several HOG extraction processes, namely (1) gradient computing, (2) gradient vote, and (3) block histogram normalization. After getting the shape extraction value in humans to get the detection results, the process is carried out using the SVM classification method. Good results were obtained when testing the crowd image, namely humans were detected in a crowd position.

Based on the best result from tasting and making the SVM model that will be used, ratio of 90% training data and 10% test data has been obtained. With the result of testing data on social distancing detection in the crowd with an accuracy obtained of 91%.

Keywords: *Crowd Image, Histogram of Oriented Gradients, PeopleDetection. Computer vision.*