

ABSTRACT

Covid-19 is currently having a huge impact on all levels of society. Therefore, proper handling is needed to suppress the spread of Covid-19. The spread of Covid-19 can occur in places that have the potential for crowds, one of which is schools. Schools as a gathering place for many people have the potential to become a point of spread of Covid-19. One way to prevent the spread of Covid-19 is to practice social distancing. Students in general have not been able to comply with the health protocol. To overcome this problem, we need a system that can recognize people automatically so as to make the classification of Social Distancing easier.

For this reason, this Final Project is structured to create a system that can detect Social Distancing in a crowd of students using video detection. Then the detection is used to find out how many people do Social Distancing or violate Social Distancing. This system uses the You Only Look Once (YOLO) algorithm. The process carried out by the system to detect Social Distancing is to detect Persons then the number of people who practice Social Distancing will be counted by being given a green Bounding Box or violating Social Distancing by being given a red Bounding Box.

The dataset scheme used in this study is 1800 pictures of Person, the dataset is divided into 3, namely training data 70%, 80%, 90% and test data 30%, 20%, 10%. The performance parameter reviewed is the mean Average Precision (mAP). The highest mAP value was obtained by a ratio of 80%: 20% of 35.87% with the configuration of Epoch 5000, Batch 64, and Learning Rate 0.001 for the training process. The model has been successfully implemented on a desktop application to detect Social Distancing.

Kata Kunci : *Social Distancing, You Only Look Once, Deep Learning, Computer Vision*