**Abstract**

The use of mask is a mandatory for everyone in the pandemic regulation to prevent the spread of COVID-19 infection. This becomes a pandemic regulation for everyone, especially in public places like in traffic situation, such as pedestrian and motorcyclists. However, many motorcyclists ignore this rule or do not use the mask properly, let alone they have high risk in being infected by the virus; Thus, a computer vision-based solution is required to help monitoring it. This study aims to built a system to automatically detect the use of mask on motorcyclists. Here, we propose a YOLOv4 model, one of YOLO variants, which is popular in the object detection task and featured with a considerably high speed in real-time situation. This study also implements domain adaptation to discuss the object detection performances. Based on the experimental results in various scenarios, our model obtained average accuracy of 78.3% and IoU of 64.8% for class *with_mask*, average accuracy of 78.4% and IoU of 56.3% for class *without_mask*, and average accuracy of 87% and IoU of 55.5% for class *incorrect_mask*.