ABSTRACT

Traffic violations have happened a lot for the time being. One of the violations that occurred, caused by motorcyclists. Many motorcyclists do not use helmets when traveling, so it can increase the risk of death in the event of an accident. One of the reasons many motorcyclists violate traffic rules is the absence of supervision from the traffic police in real-time.

Therefore, in this Final Project proposal, it is proposed to create a helmet violation detection system on two-wheeled vehicles using an SSD algorithm that can make it easier to detect violations of not using a helmet when riding a motorcycle. The way this system works is that the camera that has been installed in the designated place, will detect a passing motor. If the camera detects a violation in the place where the camera has been installed, it will later send a notification message to the police.

From the results of the final project study of the helmetless rider detection system on two-wheeled vehicles this time using the SSD algorithm obtained a value of mAP@50IOU 79.2% and AR@100 61.4% with the configuration variables used were a data ratio of 90% train and 10% test, learning rate 0.008, epochs 1, and batch size.

Keywords: *Motorcycle detection, helmet detection, SSD*