

ABSTRACT

The condition of road users, especially pedestrians, in Indonesia are still vulnerable from accidents. High number of accidents to pedestrians caused by a factor of human error of road users, both the driver of a vehicle and pedestrian as vulnerable road users. To minimize an accident on a pedestrian, is required a driver assistant system a motor vehicle that practical and reliable.

Pedestrian detection is one of technology in the field of digital image processing. FPDW method be implemented in the design of mobile applications based on android for the detection of the object of pedestrians. Applications can detect objects pedestrians through smartphone device. Whenever an object pedestrian is detected, the system will activate an alarm warning. The functions of alarm warning to help drivers to remain vigilant in driving.

The pedestrian detection system is implemented on Android-based mobile application and testing the detection time and detection accuracy with various test scenarios. The results obtained FPDW method has the speed detection at 62 fps, the detection time 160.31 ms, and the average value of the accuracy of various test cases reached 55.71%.

Keywords: computer vision, pedestrian detection, FPDW, image processing, mobile application.