ABSTRACT

Pedestrians affect 22% of all accidents on the highway. This triggers an innovation that can be used to improve the safety and comfort of all pedestrians. An object detection system can be one of these innovations. With the implementation on a vehicle, the system can immediately identify any pedestrian location in front of the vehicle. But it needs a detection system that has a faster response time or process.

A method that can be used in this problem is using the fast gradient histogram feature method. This method is built upon the fastest pedestrian detector in the west detection system [1] which previously can produce 10 values of false positives per image (fppi) with 80% detection accuracy. On FGHF, it will use an additional method, a fast feature pyramid which can reduce computing time significantly.

The pedestrian detection system works well on identifying object with EPFL datasets as observation object with average detection accuracy up to 52,60% and average computation time 0.15 seconds.

Keyword: *pedestrian detection system , FPDW, EPFL datasets, fast feature pyramid, haar cascade*