

ABSTRACT

Based on ntmc.polri.info in 2015 there were 646 accidents during homecoming season, most of accidents occurred due to driver's exhaustion and lack of sleep, and it causes drowsiness. Some technologies utilize brain wave sensors or motion sensors to detect sleepiness. The system consist of infrared cameras as input, the application of the dlib method and deepgaze in Raspberry Pi as input processors, can be used to determine drowsiness status based on the driver's head pose. The system is able to detect drowsiness without urge the driver to use a wearable device such as a helmet or eye glasses with sensors. The system is able to detect drowsiness in 3.1 seconds delay and 73.3% of accuracy rate within dark conditions with a light unit value between 0 to 4 lux. While in luminous conditions within a light unit value between 1110 to 1666 lux, the average delay time to detect drowsiness is 2.9 seconds and 83.3% of accuracy rate.

Keywords: Dlib, Deepgaze, Head Pose, Driver's Drowsiness