

ABSTRACT

There are so many traffic accidents happen caused by less concentration or negligence of the driver. Estimating a safe distance at a certain speed with the front car is something required to be known by the driver. However in fact, many drivers still confuse to estimate a safe distance with the front car. This can cause traffic accidents due to negligence of the driver.

In this final assignment has been made a simulation system detection of safe distance at a certain speed. Motion detection method is used to detect the distance of an arbitrary object. Lookup table is used to measuring the distance of an object. This lookup table contains information about the number of pixels of the object at a certain distance. System will give a sign if the distance with the object smaller than safe distance.

This system simulation has an accuracy rate of 80% to detect a square-shaped object in indoor, while in outdoor, achieving 90% accuracy rate. When the system is simulated on the car, the system can detect cars up to 10 meters, but the system is still very susceptible to light intensity.

Keywords : Velocity, Motion Detection, Pixel, Image, Lookup Table