

Informatics Institute of Technology

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Driver Warning System

A dissertation by

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Abstract

Considering the road accidents in the world, it had been proved that most of them had occurred due to driver drowsiness and drunkenness etc. Driver drowsiness can occur due to various reasons such as tiredness of the driver, medication and so forth. Whatever the reason, in the most of the cases the final outcome has bad consequences. Deaths, damages to properties and people getting disabled are some of them.

In order to come up with efficient and effective solutions to minimize road accidents, to increase driver awareness so on, advanced technologies such as image processing and computer vision can be used.

Main purpose of the proposed system is to implement in vehicle with less cost. As most of the people can't afford to buy high end vehicle for safety and security, they can use the proposed system as a security measure for the automobile industry. As mentioned earlier image processing and computer vision technologies are using in order to develop this system. These technologies are proven to be accurate and efficient by researches that had been carried out for so many years and also that it reduces the overall cost factors of the system.

The proposed system will use a web camera to get a video stream of the driver. Afterwards this stream will be chopped into image frames using image procession techniques and will identify the face and eye of the driver. Once the eye are detected the state of the eye (opened or closed) will be detected. If the eye is closed for a consecutive period of time an alert will be prompted. The main research areas of this project are face detection, eye detection and image processing techniques such as template matching etc.