FINAL YEAR PROJECT REPORT

REAL TIME INTELLIGENCE SYSTEM FOR DRIVER FATIGUE

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REAL TIME INTELLIGENCE SYSTEM FOR DRIVER FATIQUE

ABSTRACT

Driver fatigue is the major cause of traffic accidents, since Sleepy drivers are unable to make rapid decisions to control the situations. So we develop a system which will help to decrease the amount of crashes due to fatigued driver. Our system is implemented by using Matlab and its image processing tool box. The system uses a web camera that that points directly towards the driver face and began to monitor the driver eyes in order to detect fatigue. And when the fatigue is detected a warning system is trigger to alert the driver. Our report will describe that how we find the eyes and also define how we determine in the system that the eyes are open or closed. Our algorithm is unique to any currently published papers. The system uses viola and Jones algorithm to find the face in the frame. Once face is found. The next step is to find the eyes which are found by using our self developed algorithm we named as cropper. Our cropper function finds the left and right eye separately. Now we apply our self modified intensity algorithm on left and right eye, which measure the distance between the intensity changes in eyes. A small distance corresponds to eye open and large distance to eye closure. If the eyes are found closed for 5 continuous frames, the system will draw conclusion that driver is asleep and issue an alarm call. The system is also able to detect when eyes are not found and its work under adequate light.

Keyword: Viola and Jones, Intensity, Threshold

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