Driver Drowsiness Detection System In Vehicle

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Abstract- *This project describes a driver fatigue detection through tracking the eye states. Camera is fixed in front of the driver and monitor the driver eye states continuously then capture the eye state images It also explain the vision based driver fatigue detection method. The detection is achieved using the famous viola Jones algorithm followed by eye tracking. This particular issue demands a solution in the form of the system that is capable of detecting drowsiness and to take necessary actions to avoid accident. .The experimental results show validity of our proposed method.*

Keywords- Viola Jones algorithm, Cascade classifier, fatigue detection

I. INTRODUCTION

The drowsiness increases the risk of human- error related accidents. Driver's state of mentality and tiredness is one of the most important reasons of traffic accidents. There is a requirement of designing detection systems for the driver drowsiness or inattention and can produce some warning alarms to alert the driver and the further people in the vehicle. This Statistics shoe that a most important origin of critical or injury causing traffic accidents is due to drivers with a decreased awareness level.

II. LITERATURE SURVEY

Steer track, which tracks the rotation angles wheel in real time leveraging audio devices on smartphones . Steer track seeks a device free approach for steering tracking without requiring installation of specialized sensors on steering wheels nor asking drivers to wear sensor on wrist.

Senspeed which sensors is detect the speed of vehicle with addition of landmarks and reference points . Then the system is alert the driver to prevent the accidents.

They proposes a driver drowsiness expression classification method that uses dynamic facial fusion information and a DBN. The facial texture and landmarks are extracted from image sequences and fused by using DBN to enhance the performance of driver drowsiness detection.

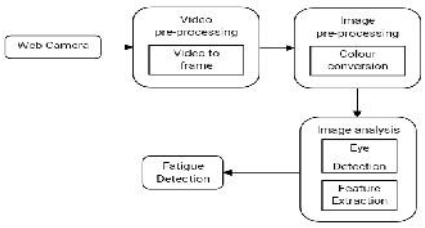
III. EXISTING SYSTEM

In this project, they presented a vision- based method and system towards bus driver fatigue detection using existing dome cameras in buses. The approach also detect the driving behaviour of drivers such as yawning ,nodding. Finally, a multi -model fusion scheme is designed to infer eye sate and a PERCLOS measure on the continuous measure of eye openness is computed to predict driver's attention state, i.e., normal or fatigue driving state.

IV. PROPOSED SYSTEM

In this project, we clearly put forward the definition of the transitional process of fatigue and first discuss the importance of samples in this process in this system. The formation of fatigue is not a process of steady development. The transition of sobriety and fatigue may appear frequently when humans are influenced by environmental interferences during the process from the fully sobriety state to the fully fatigue state. This process is called transitional process. We get the images of drivers from various illumination conditions and extract the feature like cup to disc ratio. Based on the feature we decide the drivers is in fatigue or not.

V. SOFTWARE BLOCK DIAGRAM



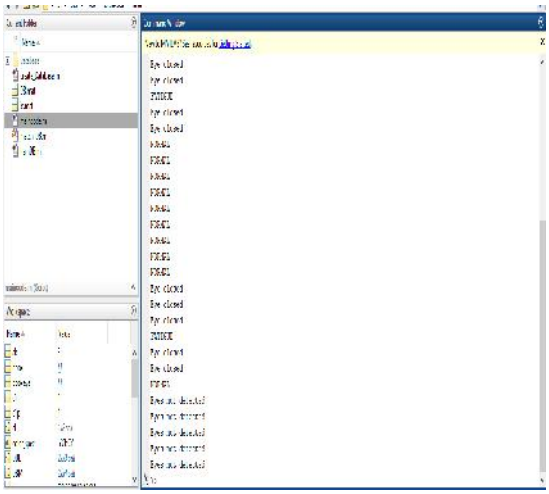
VI. RELATED WORK

The main of this work improve to capture the eye states and store the image into separate folders then drowsy is detected by number of closed eye states.

Opened eye

Closed eye

VII. OUTPUT



IX. CONCLUSION AND FUTURE WORK

This detection system has been developed using a Viola Jones algorithm based concepts. The drowsiness success rate is high because independent haar cascade classifier and detectors are used for left eye and right eye tracking. Detection system using viola Jones algorithm is fastest and most accurate among the face detectors. This system also tried to overcome the difficulties in earlier stages. In this system fatigue will be detected immediately and also shows current status of driver. It provides new enhancement in technology. The system can be very useful to avoid accident and can save people life.

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