

DRIVER MONITORING SYSTEM AND SMART VEHICLE

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Abstract - Nowadays the driver safety or vehicle safety is one of the most wanted systems to avoid accidents and be safe in our day-to-day life. So objective of this project is to provide the mechanism and ensure the safety of driver as well as the passengers in that vehicle. In this Project we are building a system for advance safety mechanism which protects the driver as well as passengers of that vehicle by driver monitoring and also road monitoring using the face recognition and object recognition and give indications and alerts as per the scenario to the driver for a safe and secure travel.

As per the title we also provide a system which can convert a simple car or vehicle into a smart vehicle by deferent indications and features like parking sensors, tyre pressure sensor, fuel level sensor, speed sensor, door open alert and much more in very cheap cost as compare to the smart cars which are really very expensive. The result of this project we ensure the safe travel in our own vehicle with some additional smart features which gives fast and exact information and suggestions to driver to make the travel more efficient and also save time and money.

Key Words: Android Application, Arduino, Driver Monitoring, Face Recognizing Object Recognizing, Security, Smart Vehicle, Speed Sensor Detection.

1. INTRODUCTION

1.1 Problem Definition

To be safe, a driver must pay attention and exercise sound judgment. However, when the driver is stressed, fatigued, or drowsy, these abilities get degraded. Stress degrades driving performance and increases the likelihood of trace accidents

1.2 Proposed Solution

Our system is portable and can be implemented on any vehicle it has more features of the smart vehicles which make our existing car or vehicle a smart vehicle by using the reverse parking sensors with camera, the front facing camera for the road signs detection and give the alerts depending on the survey also it has tyre pressure sensors, fuel level sensors, door open alert, anti-theft functions etc. combine these features we build a single system which overcomes the accidents and save the life of the driver as well as the passengers. We also have an android app which gives us all the details of our smart vehicle and the details of the sensors in a single place.

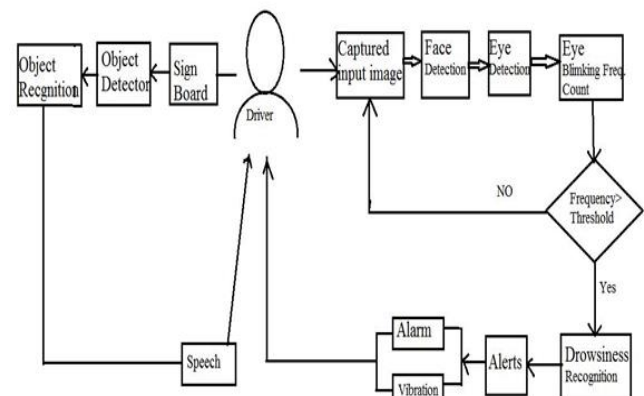
2. LITERATURE SURVEY

In This system will monitor the heart rate of the driver or the person who wear the device and also detect the movement of person by the device.[1]

Detect the drivers drowsiness by the help of eye movement by camera. Give alert on the basis of the drivers drowsiness to keep him a wake.[2]

This proposed method presents visual analysis of eye state and head pose (HP) for continuous monitoring of alertness of a vehicle driver. Most of the previous techniques of visual detection to non-alert driving patterns rely either on eye closure or head nodding angles to determine the driver drowsiness or distraction level.[3]

3. SYSTEM ARCHITECTURE



4. CONCLUSION

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