DRIVER FACE MONITORING SYSTEM

ABSTRACT

Currently, transport systems are an essential part of human activities. We all can be victims of drowsiness while driving, simply after too short a night's sleep. Drowsiness and Fatigue of drivers are amongst the significant causes of road accidents. Every year, they increase the amounts of deaths and fatalities globally. A module for Advanced Driver Assistance System (ADAS) is presented to reduce the number of accidents due to drivers fatigue and hence increase the transportation safety, this system deals with automatic driver drowsiness detection based on visual information using Machine Learning. We propose an algorithm to analyze both the driver face - eyes, mouth to measure PERCOLS, a scientifically supported measure of drowsiness associated with slow eye closure and mouth enlargement(yawn). The project will be implemented in Machine Learning, an open-source framework. Being an open-source framework, it is easy to customize. The algorithms used to detect the face are CNN(Conventional Neural Network), KNN(K-Nearest Neighbour), Decision Tree. CNN are typically used to analyze image data and map images to output variables. KNN gives the best sample accuracy for the given dataset. The following face detection step, the facial components that are more important and considered as the most effective for drowsiness, are extracted and tracked in video sequence frames.

Team – 7
N.Akshitha Reddy (18WH1A1234)
CH.Srivalli (18WH1A1238)
T.Mahalakshmi (18WH1A1244)

Internal Guide
Dr.T.Subetha
Assistant Professor