TEAM HASH

Members

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live-i

DOMAIN NAME

VOICE AND IMAGE PROCESSING

PROBLEM STATEMENT

According to the most recent published World Health Organization (WHO) report, it was estimated that nearly 1.25 million people were killed on the roads worldwide, making road traffic injuries a leading cause of death globally. Distracted driving is a serious and growing threat to road safety. Collisions caused by distracted/inattentive driving have captured the attention of the US Government and professional medical organizations during the last years. They have estimated that distraction and inattention account for somewhere between 25% and 75% of all or near crashes.

ABSTRACT

Driver distraction, defined as the diversion of attention away from activities-critical for safe driving, is increasingly recognized as a significant source of injuries and fatalities on the roadway. With an aim to minimize accidents due to distraction, we have developed this live-i which would beep anytime the system detected that the driver had crossed the threshold for unsafe driving. Activities such as looking away, using electronics, improper grip of steering, drowsiness are detectable using this device. Developed as a software/hardware design that could be retrofitted to any vehicle and uses only camera input to alert drivers at times when they are too distracted.

NOVELTY

Our idea of live-i is very original and unique as it is one of it's own kind. It could detect drowsiness, and a myriad range of activities such as using electronics, looking away for too long, eating, drinking etc. If there ever be an accident, it would immediately demonstrate whether the driver was distracted at the time! While designing, several requirements have been taken into account: reliability, real-time performance, low cost, small size, flexibility and short time-to-market.

TECH STACK

- Mediapipe
- Flask
- OpenCv
- Html 5
- CSS 3
- Java Script
- Bootstrap

IMPLEMENTATION

STEP 1

Planning the Project

- Planning the functionality of the project.
- Making pseudo website design.

STEP 2

- Shortlisting Machine Learning Algorithms to use.
- Website Design Implementation.

STEP 3

Trying different ML algorithms and selecting the optimum model.

STEP 4

Connecting Machine Learning project with the frontend using Flask as backend.

STEP 5

Deploying the Project

BUSINESS SCOPE

- The software/hardware design can be sold to company's like Uber, Ola which are widely used transportation companys. The installation of it in cars, taxis will not only avoid road accidents, but will also help company owners to know the efficiency of their drivers.
- This will be a new & easy opportunity for ticketing when installed in public places.