Software Project Proposal

Automobile Prudent System

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Description:

21st century can be infamously described as the era of road accidents and the number of causalities are rising at a dangerously alarming rate. Our project focusses on tackling this very issue by attacking it at its grassroots level. We propose a system that mandates the driver/cabbie to adhere to the basic safety measures i.e, a system that compels the drive to wear the helmet/seatbelt in order to get the vehicle on the go. Our system works based on the collaboration of a number of sensors and a meticulously designed circuit which is integrated with an interactive easy-to-use application. The crux of our proposal is to reduce the exorbitantly high ratio of causalities to accidents by performing a timely emergency act. The system is crafted in a sophisticated manner in order to cater to the requirements of both two-wheelers and four-wheelers. It enables the user to stay connected with his acquaintances at any point of time during his journey.

Primary Actor: Driver

Secondary Actor: Driver's acquaintances

System Use Cases:

- **Activate/Deactivate Sensor:**
  i) When the driver wears his helmet/seatbelt, it activates the sensors which generates a signal that is intercepted by a circuit connected to the vehicle's ignition. This enables the vehicle to start normally.
  ii) Activating the sensor sends a signal to the application which enables the driver to start the vehicle even without keys.
- **Detect Location:**
  i) The driver's acquaintances can use this feature in the application by which they can obtain real time updates about his location at any instant of time.

References:

- Dramatic Increase in Road Accidents - https://www.prb.org/roadtrafficaccidentsincreasedramaticallyworldwide/
- M. K. A. Mohd Rasli, N. K. Madzhi and J. Johari, "Smart helmet with sensors for accident prevention," 2013 International Conference on Electrical, Electronics and System Engineering (ICEESE), Kuala Lumpur, 2013, pp. 21-26, doi: 10.1109/ICEESE.2013.6895036