Abstract

A big percentage of accidents happen on the roads daily due to young drivers not knowing the consequences of over speeding. However, we can prevent that by developing a technology that can communicate with parents and alert them when their teenagers are over speeding. The functionality of this technology will allow parents to receive a text message on their smart phone as an alert when a car goes over a speed limit that parents have set previously. A big portion of the engine information can be collected in the car using On-board diagnostics (OBD) port. One of the microcontrollers that can be used is the Arduino UNO. This technology will avoid many accidents on the roads and will allow the parents to prevent their minors from a mistake that they might regret for the rest of their lives.

Theoretical Approach

Statistical studies have proven that many car accidents happen due to teen over speeding. Parental control of speed limit will help reprimand teens for over speeding. The concept of the OBD-II will allow parents to monitor the driving behavior of their teens.

Methodology

The proposed method is to alert parents of the driving behavior of their teenagers. The OBD-II grants engine information access and takes input and transfers the information to the Arduino UNO. Data is processed and Arduino recognizes over speeding and the GSM Shield then notifies parents via a text message through GPRS.

Technical Objectives

- Alert parents of the driving behavior of their teenagers
- OBD-II grants engine information access to take input
- OBD-II transfers the information to Arduino UNO

Related Work and State of Practice

An approach was studied and proposed by an auto insurance company which was speed alert. The study looked at a technology called intelligent speed adaptation (ISA), which uses GPS to locate a car and collect speed limit data for the surrounding area and notify the driver if they exceed a set speed limit. Another approach for creating a mobile app that allowed parents to track their teens while driving was proposed by Ronald D. White.

Commercialization Plan & Partners

- Worked closely with Dr. Lubna Alazzawi
- Offer this as optional feature to auto manufacturers
- Cost effective method to parents
- Easy feature for auto manufacturers to add with a low cost

References