Autometed Accident Detector

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Abstract

Everyday people lose their lives because of accidents and poor and fast emergency facilities. These lives could have been saved if medical facilities are provided at the right time.

This project implies a system which is a solution to this drawback, when a vehicle meets with an accident immediately a message with location will be sent to emergency services. So, the team can immediately trace the location and save the person.

The proposed systems have been simulated and practically design by the use of hardware components and the results are satisfied with the expectation.

System Description

➢ MPU6050 Module (6-DOF) ; 3-axis accelerometer with Micro Electro Mechanical (MEMs) technology. It used to detect angle of tilt or inclination along the X, Y and Z axes as shown in below figure)

➢ GSM module sends the alert message on registered Mobile Phone with the location of the accident.
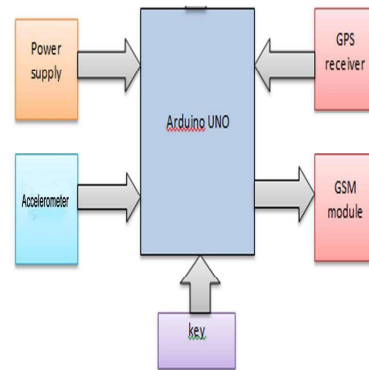

➢ Location of accident is sent in the form of Google Map link, derived from the latitude and longitude from GPS module.

➢ Arduino UNO takes the information from sensor and GPS module and compiled it and send this all information in the registered mobile number using through the GSM module

➢ Power supply are given in arduino using bettery.

Future Scope

Future scope 1: This system can be interfaced with vehicle airbag system that prevent vehicle occupant from striking interior objects such as the steering wheel or window.

Future scope 2: This can also be developed by interconnecting camera to controller module that takes the photographs of the accident spot that makes the tracking easier.

Implementation
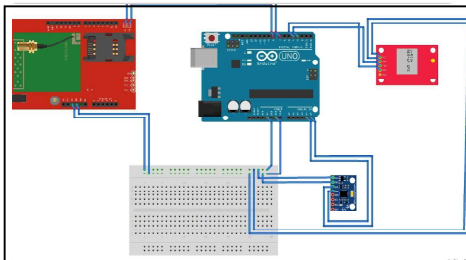
• This is a very small project and can be used in real time applications.

• It can be fitted easily inside any vehicle

• It will be connected with the main battery of the vehicle.

• When the engine of the vehicle will start, Arduino will automatically get start with it and as well as rest of the other hardware devices.

Results
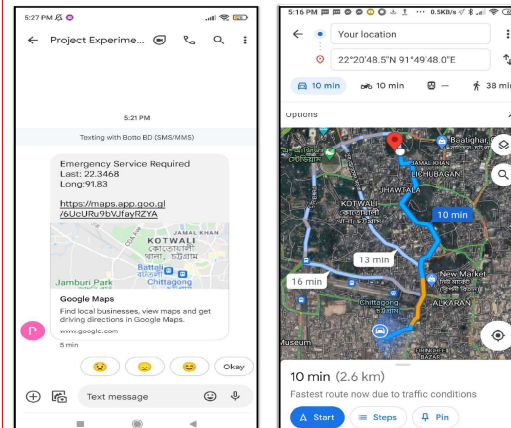
Emergency Service Required message is received along with latitude and longitude of the exact location where accident has occurred.
The link redirects to google map.

Introduction

Motivation and Objectives:

Vehicle accidents are one of the most leading causes of fatality. The time between an accident occurrence and the emergency medical personnel are dispatched to the accident location is the important factor in the survival rates after an accident.

By eliminating that time between an accident occurrence and the first responders are dispatched to the scene decreases mortality rates so that we can save lives.

One approach to eliminate that delay between accident occurrence and first responder dispatch is to use An Accident Alert and Vehicle Tracking System, which sense when a traffic accident is likely to occur and immediately notify emergency occurred.

Limitations

→ It does not work without network.

→ GPS module sometimes takes much time to connect to the signal.

→ Arduino works on 8V battery charge. It would malfunction even on 7.9V

References

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2. Aditi V. Rokade, *Real Time Vehicle Accident Detection and Tracking Using GPS and GSM*, International Journal on Recent and Innovation Trends in Computing and Communication