

POST ACCIDENT SECURITY TECH

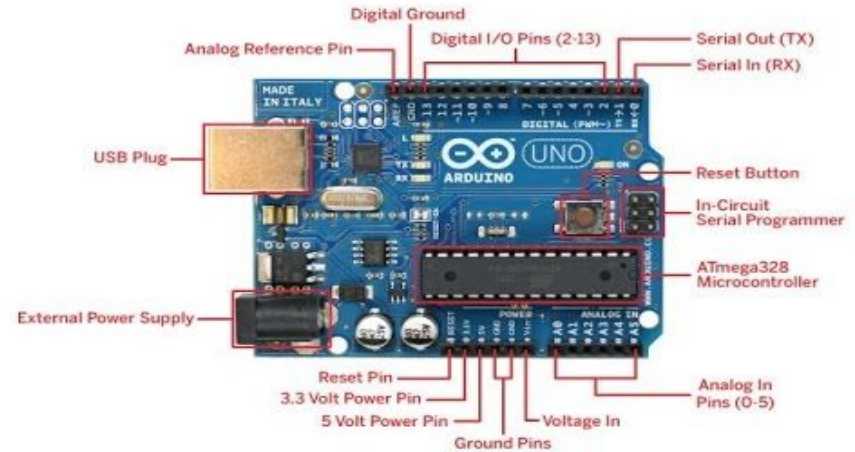
Frequent Road Mishaps

- An accident, also known as an unintentional injury, is an undesirable, incidental, and unplanned event that could have been prevented, had circumstances leading up to the accident been recognized, and acted upon, prior to its occurrence.
- We all hear about road mishaps every day in news and are worried about our safety. Many of us are worried about our safety while we get on the road to travel. There is no surety if we will reach our destination safely or not.
- About 85 % of all accident deaths occur in developing countries and nearly half in the Asia-Pacific.
- India accounts for about 10 % of road accident fatalities worldwide.

PROJECT AIM

- Our major aim is to help the person who had been in any kind of vehicle deterioration by automatically connecting the cell device of the victim to the two other cell devices and making sure that the victim is safe by some basic alert questions
- And in case if the victim responds within the limit of alarm then he or she is safe otherwise we consider his or her condition to be unsafe and an automatic call is made to the ambulance for further investigations.
- The gps location and the vehicle number will be automatically texted to the connected cell devices.

Hardware Used



- ARDUINO UNO –

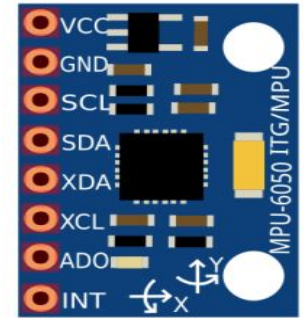
The Arduino Uno is a microcontroller board based on the ATmega328. It has 20 digital input/output pins (of which 6 can be used as PWM outputs and 6 can be used as analog inputs), a 16 MHz resonator, a USB connection, a power jack, an in-circuit system programming (ICSP) header, and a reset button.



- ***Bluetooth Module HC-06***

The HC-06 is a class 2 slave Bluetooth module designed for transparent wireless serial communication. Once it is paired to a master Bluetooth device such as PC, smart phones and tablet, its operation becomes transparent to the user.

- ***Accelerometer and gyro sensor MPU6050***



The MPU 6050 is a 6 DOF (degrees of freedom) or a six-axis IMU sensor, which means that it gives six values as output: three values from the accelerometer and three from the gyroscope. The MPU 6050 is a sensor based on MEMS (micro electro mechanical systems) technology. Both the accelerometer and the gyroscope are embedded inside a single chip. This chip uses I2C (inter-integrated circuit) protocol for communication.

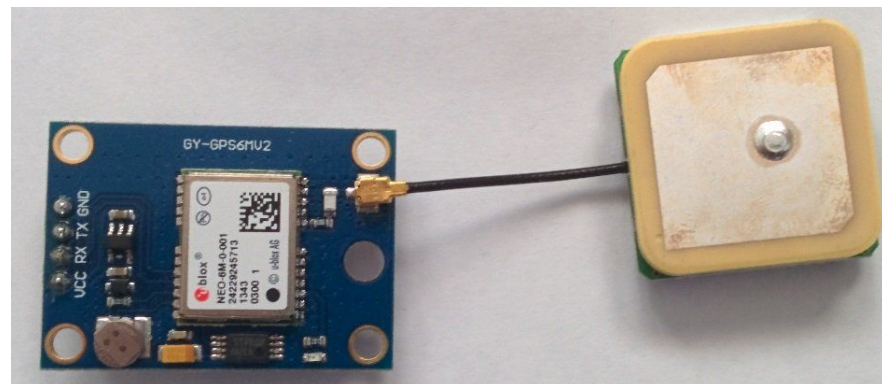
- ***Wifi module / Node MCU ESP8266***

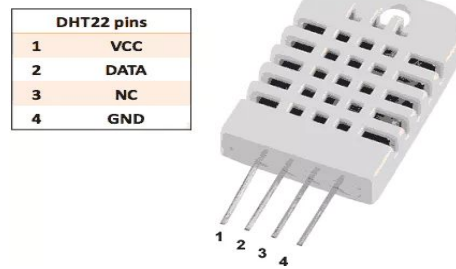


The Arduino Uno WiFi is an Arduino Uno with an integrated WiFi module. The board is based on the ATmega328P with an ESP8266 WiFi Module integrated. The ESP8266 WiFi Module is a self contained SoC with integrated TCP/IP protocol stack that can give access to your WiFi network (or the device can act as an access point). One useful feature of Uno WiFi is support for OTA (over-the-air) programming, either for transfer of Arduino sketches or WiFi firmware.

- ***GY-GPS6MU2***

The NEO6MV2 GPS module comes with 4 connections: RX, TX, VCC and GND, which is quite easy to incorporate with using SoftwareSerial on an Arduino Uno or a serial interface on an Arduino Mega.





- ***Temperature and humidity dht-22 sensor***

DHT22 capacitive humidity sensing digital temperature and humidity module is one that contains the compound has been calibrated digital signal output of the temperature and humidity sensors.

The sensor includes a capacitive sensor wet components and a high-precision temperature measurement devices, and connected with a high-performance 8-bit microcontroller. The product has excellent quality, fast response, strong anti-jamming capability, and high cost.

PROCEDURE

- Research
- Getting the essential Hardware
- Arduino uno study
- Connections of the sensors
- Coding/writing the sketches for the respective sensors and uploading the codes
- Creating the effective android app to merge the sensor outputs.

Hardware Of The System

