DIY TEAM PROJECT

REPORT OF TEAM -6

Problem Title:

Imaging based technology/product for tracking vehicular pollution

Motivation:

Vehicular pollution is a big issue in our country. One way to deal with this problem is to monitor it and penalize the vehicle owner that cause it. We can track the pollution emitted by the vehicle through image processing, and assign contribution to vehicles seen e.g. by cameras at the signals.

Objectives:

The whole motive is that to detect the pollution level by sensors and to detect the car which is emitting the toxic gases like CO , CO2 ,NO2 etc ,so we can penalize that vehicle owner .We need the sensors like MQ-7 to detect the CO level .We have to connect the sensor to the nodeMcu ESP-8266 mod wifi module in which the microcontroller is present so there is no need of separate Arduino board . we will write such codes that the readings collected by the sensor will push to the server /channel .

Workdone:

1)We have successfully set up the hardware consisting of MQ-7 sensor ,NodeMcu WiFi Module ,breadboard using jumper wire.

2)We have also written codes for MQ-7 sensor and NodeMcu WiFi Module for functioning the sensor and pushing the data to server.We were able to see the variation in the serial plotter when we make smoke near to the sensor and also when the sensor is kept near vehicle.

3)we have created the channel on Things Of Speak IoT so that we got the API key for our channel .If we give our channel information to any person so he/she can see the data from anywhere in world .

Conclusions :

All the hardware parts like MQ-7 sensors and NodeMcu WiFi Module were working in good condition but there are some fault in the NodeMcu WiFi Module as its pins were not fixing in the Breadboard .We searched about the pin configuration NodeMcu WiFi Module and connected the main pins to the breadboard using jumper wire. We were facing issue that the data goes to the channel is constant throughout the time .The sensor is also good working but for accurate measurement of the level of CO we need to calibrate sensor in the atmosphere whose CO level is known to us .This project taught us numerous things like the configuration of hardware and codes for functioning the sensors.