Embedded System Project
Mid Term Evaluations:-

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Aim:-

Demonstration of Hardware component connectivity

Plot 1 : Self Driving Surveillance bot

Surveying Data : Temperature/Humidity ,Gas Suspicion and Obstacle detection.

Abstract:

Surveillance bot are basically used for security purposes which can work 24X7 and Provide Real World time Information without any delay so any Unusual change can be monitored .

Justification :

1.In a situation where you want to monitor changes in restricted areas where no one is allowed to go .The bot is programmed to move in a particular trigictor and detect any obstacle in the trigictor which can directly survey a sudden change due to unwanted obstacles in the trajectory.This bot can be handled manually by camera and bluetooth module embedded in it .

2. Change in Temperature may be due to a fire ignition to violate any security measures.

3.Gas sensor to detect sudden change in atmosphere due gas.May be to violate and Disturb the security measures.

Connectivity:

The whole Data is monitored in a private web server created by a personal IP of wifi. To monitor the data through a well defined graph.

Functional Block Diagram:

Component/Functionality Matrix:

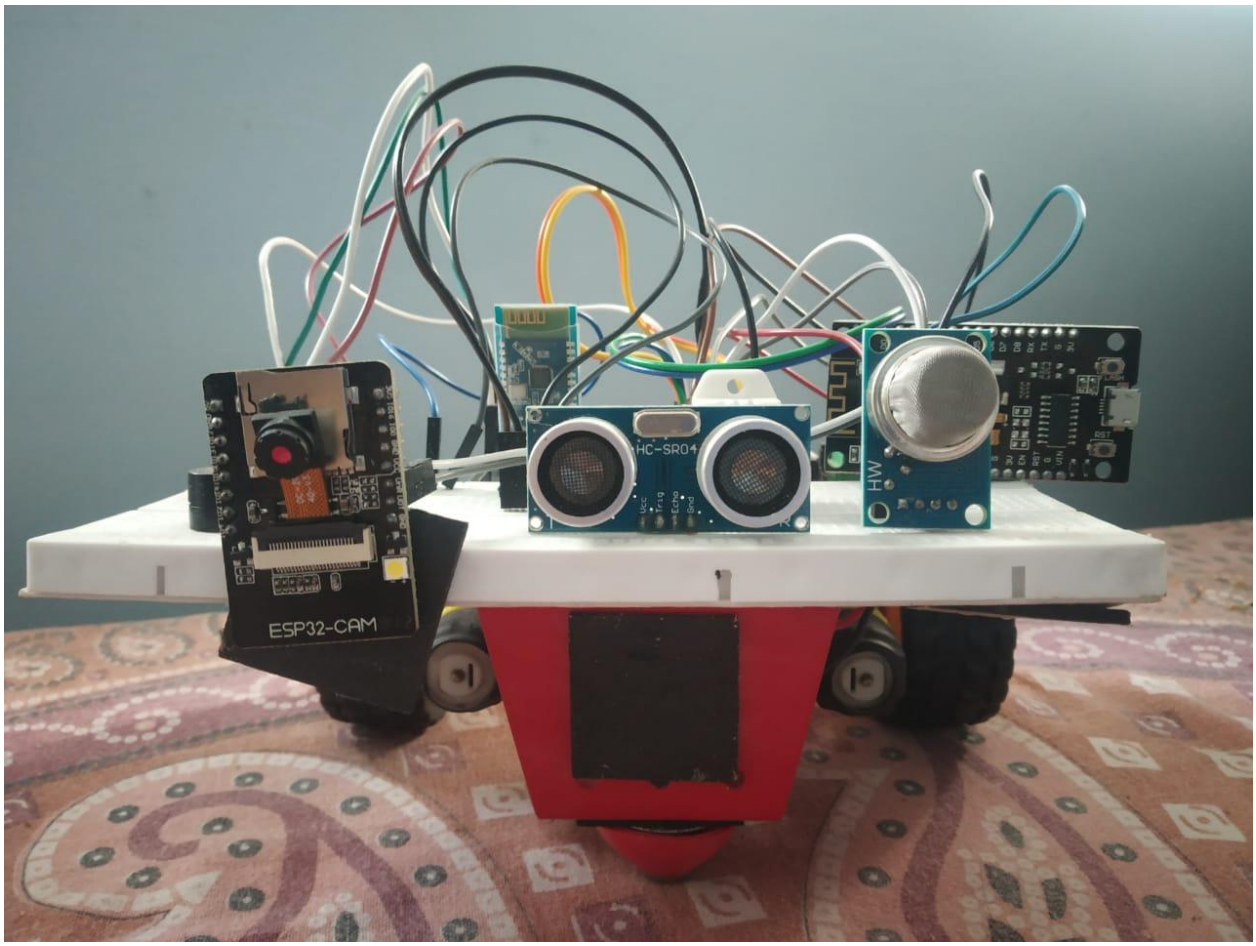
	Temperature and Humidity sensor		
Ultrasonic sensor sensor	Arduino Uno	Node MCU	WEB SERVER
	Gas Sensor	Power Supply	
	Motor Controlling Logic Board	Motor 1	Power Supply
	Motor 2		

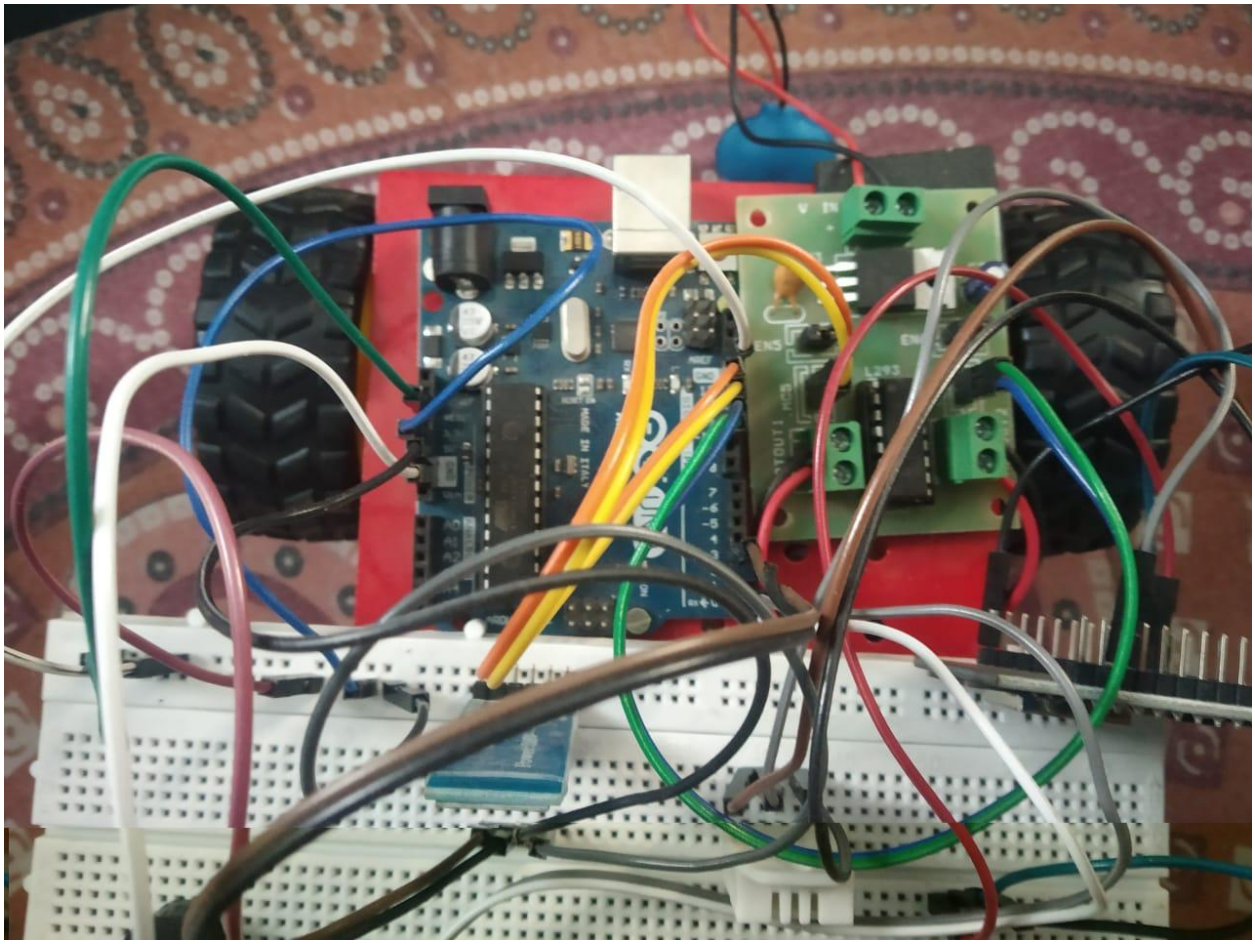
Links to code used in our project:-

1. Connectivity with Esp32 camera with web service. https://github.com/tom635/Aurdino-Projects/blob/main/CameraWebServer/CameraWebServer.ino
2. Connectivity of Node MCU with temperature and humidity sensor ,gas sensor . https://github.com/tom635/Aurdino-Projects/blob/main/FirebaseDemo_ESP8266/FirebaseDemo_ESP8266.ino
3. Connectivity of Arduino Uno with Bluetooth module .

https://github.com/tom635/Aurdino-Projects/blob/main/Bluetooth_controlled_car/Bluetooth_controlled_car.ino

Bot Images:-





Phase 1

Demonstration of 50% Hardware component connectivity

Phase 2

Connectivity through web server and complete working of Project.