

Smart Electric Vehicle

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Abstract: Nowadays, the entire economic, social and political life of a modern country depends upon an efficient system of Transportation. In such case, hydrocarbon powered vehicles i.e. IC engines are used mostly in vehicles for transportation. But the main drawback is the extinction of Fossil fuel (Hydrocarbon). To overcome this problem Electric Vehicle (EV) was discovered. Comparing EV and IC engines, EV possess higher efficiency and weight/power ratio. Normally, in EV, DC motors are used, which contains lesser speed range when compared to IC engine and hence, it was not able to satisfy the customer need effectively and efficiently. This project showcases the synergistic integration of microcontroller platforms and peripheral devices for environmental monitoring and control. An Arduino Uno serves as the central processing unit, interfacing with a DHT sensor to acquire real-time temperature and humidity data. This information is then displayed locally on an LCD module for immediate user feedback. Furthermore, a Node MCU ESP8266 module provides wireless connectivity, enabling potential remote monitoring or control functionalities. To demonstrate actuation capabilities based on environmental conditions, an L293N motor driver is incorporated to control a DC motor. This setup exemplifies a low-cost, versatile platform for applications ranging from automated climate control systems to remotely accessible environmental data logging.

Keywords: Arduino uno, Node MCU, LCD, DHT, Relay, Solar, Motor Driver L298N, Voltage Sensor, Battery Pack

