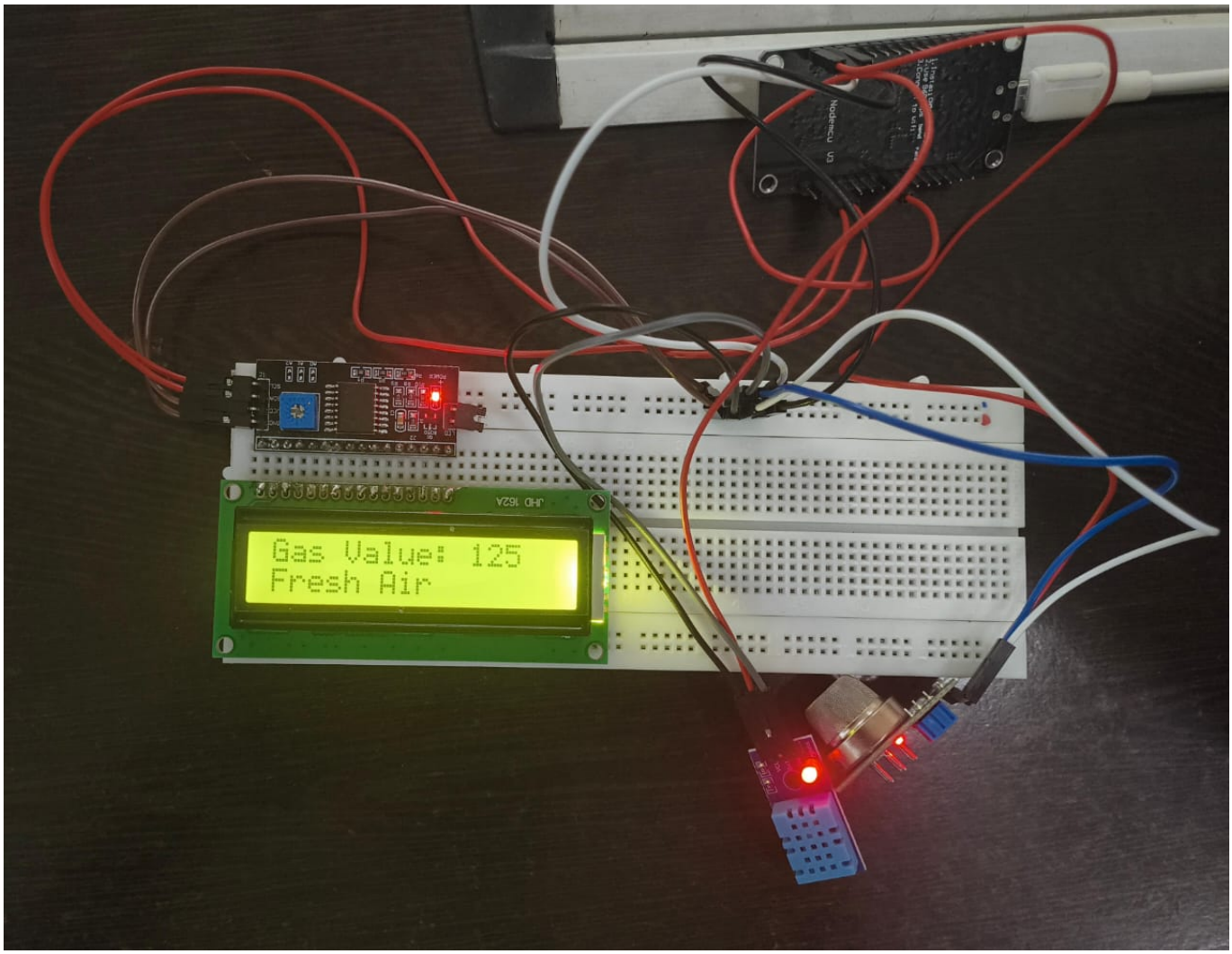
Air Quality Monitoring System using ESP8266 and Blynk IoT



This project presents the design and development of an Air Quality Monitoring System that leverages the ESP8266 Wi-Fi module and the Blynk IoT platform. The system is engineered to measure and transmit real-time data on air quality, temperature, and humidity. An MQ135 gas sensor is used to detect harmful gases such as ammonia, nitrogen oxide, alcohol, benzene, smoke, and carbon dioxide, while a DHT11 sensor monitors temperature and humidity.

An LCD display with an I2C converter provides real-time data visualization directly on the hardware setup. The ESP8266 microcontroller acts as the central processing unit, transmitting the collected data wirelessly to the Blynk mobile application, enabling users to monitor environmental conditions remotely. This system is ideal for use in homes, schools, or offices to ensure environmental awareness and promote healthier living conditions. Its low-cost, scalable, and user-friendly design makes it a practical solution for continuous air quality monitoring.