TOP STUDENT PROJECTS

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PROJECT TITLE

Oil Quality Degradation Monitoring System

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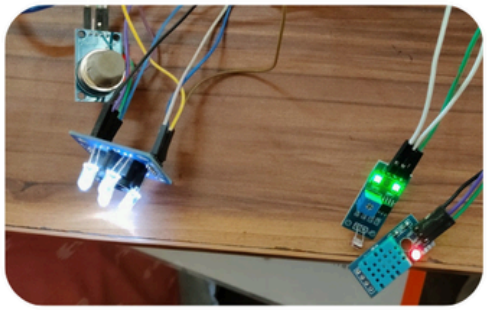


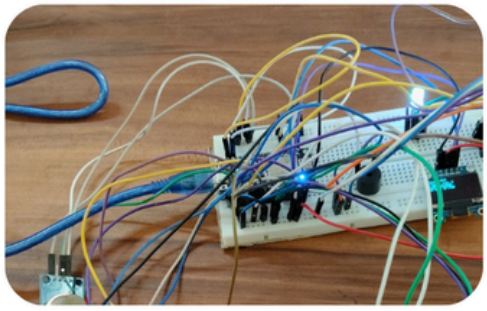
PROBLEM STATEMENT

How Might We Help households, restaurants, and food vendors detect and monitor cooking oil quality in real time by analyzing parameters such as color, temperature, gas emissions, and viscosity, reducing reliance on manual observation, enabling timely identification of oil degradation, promoting safer food preparation, reducing health risks, minimizing oil wastage, and improving overall food quality?

SOLUTION

The Oil Quality Degradation Monitoring System uses multiple sensors to monitor key oil parameters such as color, temperature, gas emissions, and viscosity in real time. An IoT-enabled controller analyzes the collected data and determines the quality of the cooking oil, providing alerts when the oil becomes unsafe for use. This solution helps users make timely oil replacement decisions, improve food safety, reduce health risks, and minimize unnecessary oil wastage. The system also maintains a quality history log, enabling users to track oil usage patterns and optimize replacement schedules. It also sends instant alerts through a mobile app.





SCAN ME

Technology stacks:

- Arduino / ESP32 Microcontroller
- Gas Sensor (VOC Detection)
- Viscosity Monitoring Sensor
- Embedded C/C++ Programming
- Cloud-Based Data Monitoring
- Mobile Application Integration