



Cheepa

"Portable Air Quality Monitor for Respiratory Health"

- **Problem:** Individuals with respiratory conditions like asthma and COPD are sensitive to poor air quality, leading to health issues
- Poor air quality can trigger severe symptoms and reduce their quality of life. Current air quality monitoring systems are not portable, personalized, or user-friendly for daily use.
- **Solution :** A portable, easy-to-use device that provides real-time air quality feedback, alerts, and data logging for individuals with respiratory conditions.
- Cheepa is a compact, bird-shaped device that provides **real-time air quality data** through audible chirps and smartphone notifications, offering immediate feedback to help users manage their exposure to harmful environments

- **Technical Feasibility**

- Sensors and Components:

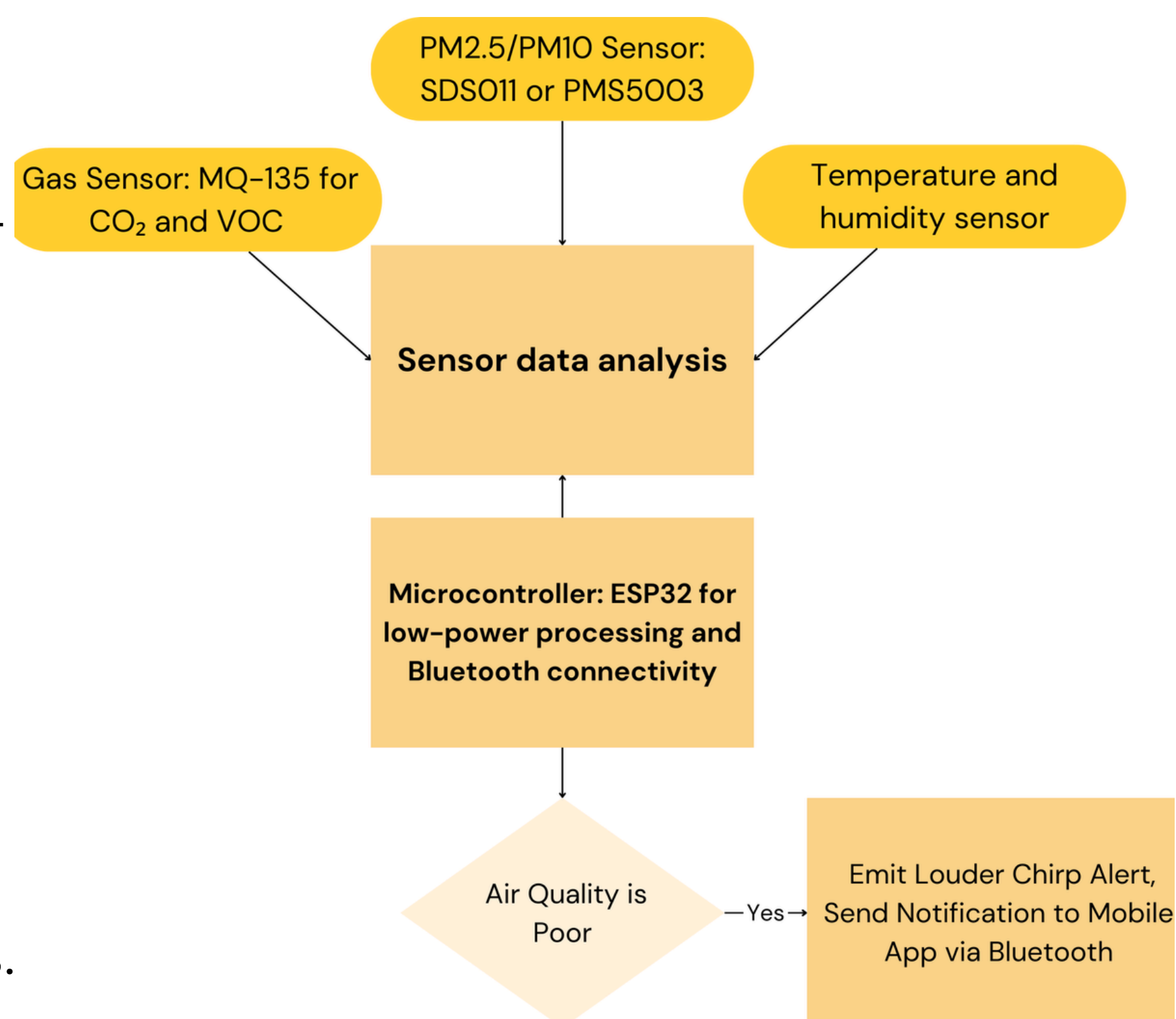
- **PM2.5/PM10 Sensor:** SDS011 or PMS5003 for real-time particulate matter detection.

- **Gas Sensor:** MQ-135 for CO₂ and VOC monitoring.

- **Microcontroller:** ESP32 for low-power processing and Bluetooth connectivity.

- **Display:** OLED for real-time data display.

- **Speaker:** Integrated in the bird's beak to produce chirps.



- **Key Features**

- Real-Time Feedback
- Mobile Connectivity (Bluetooth-enabled)
- Health Alerts(Custom Personalized notifications)
- Rechargeable & Long-Lasting

- **Team members**

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