

Agni Rakshak

(Fire Protection & Gas Detection)

DETECT ALERT PROTECT

Built Smart. Priced Low. Saves Lives



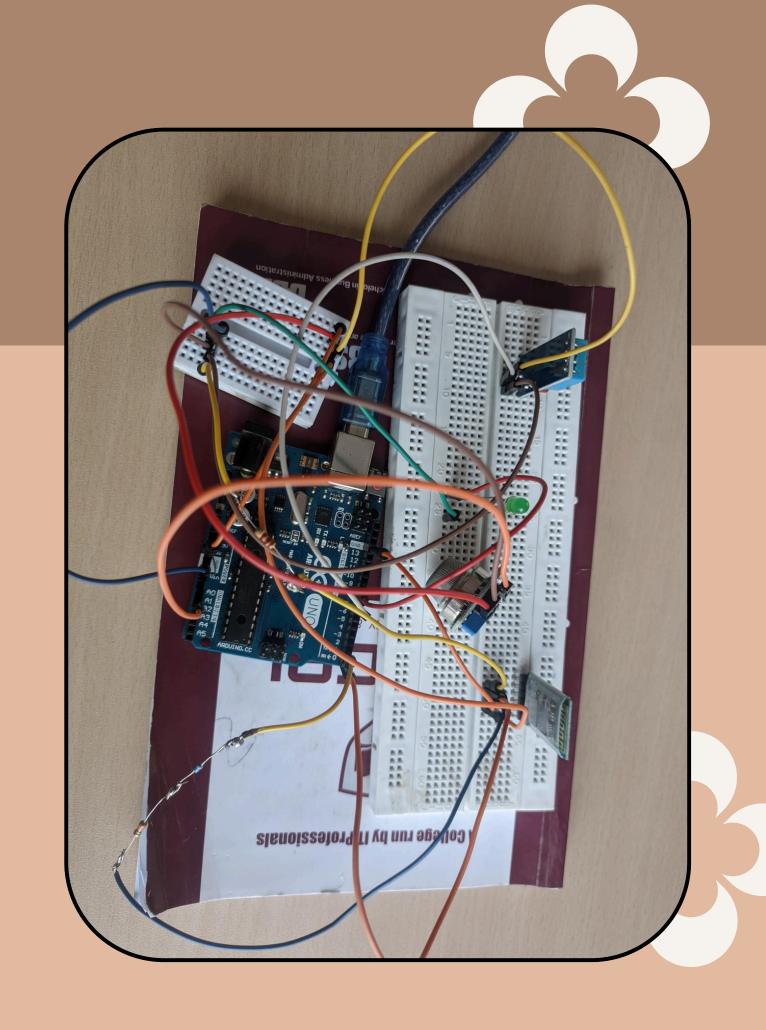
WHYY??

- Urban area face frequent threats from gas leaks and fire outbreaks.
- Lack of early warning systems leads to catastrophic damage and loss of life.
- Conventional solutions are either too expensive or require constant internet/app access.



PURPOSED SOLUTION

- Agni Rakshak is a real-time fire and gas alerting system.
- It uses low-cost sensors and components.
- Sends alerts via Bluetooth
- Automatically cuts power in case of emergency.



Web Page Mockup and Functionality



User Interface

The intuitive design ensures easy navigation for all users.



Real-Time Alerts

Immediate notifications allow users to react to emergency situations quickly.



Data Monitoring

Continuous tracking of environmental conditions enhances safety measures effectively.

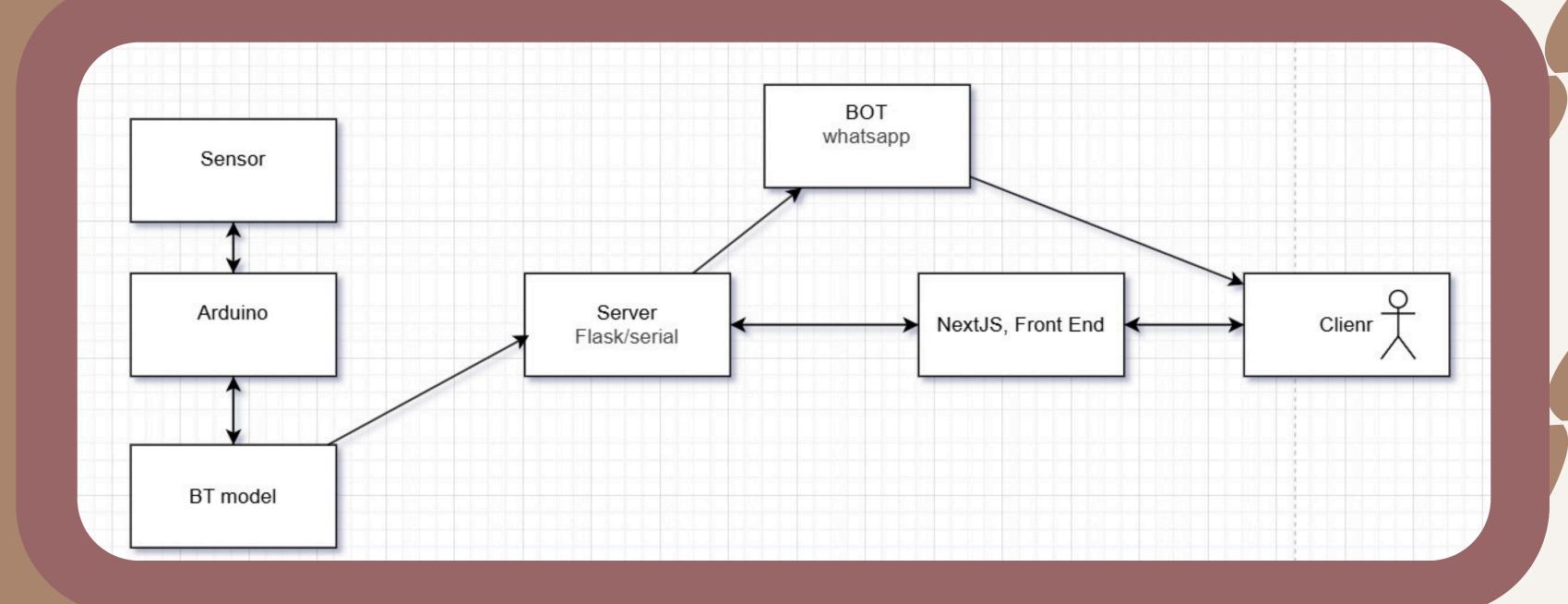
Feasibility & Cost

Impact

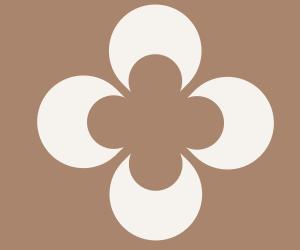
- Total cost under around NPR 700
- Uses readily available, low-cost components
- No internet or mobile app required
- Low maintenance and durable system

- Provides early detection of fire and gas leaks, helping prevent disasters
- Can save lives in densely populated, low-income settlements
- Supports disaster-resilient urban housing initiatives

Flowchart of the system









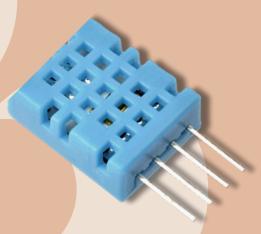
MQ 2 sensor

Detects the presence of flammable gases like LPG, propane, methane, alcohol, and hydrogen



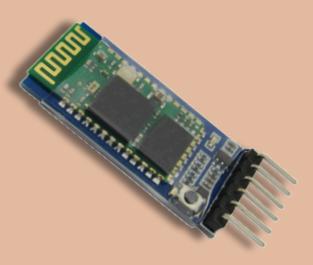
Arduino UNO

Collects sensor data, processes it to detect gas leaks or fire, sends alerts via Bluetooth, and activates a power cutoff relay for safety.



DHT11 Sensor

Measures both temperature and humidity.



HC-05 Bluetooth Module

Facilitates serial communication between Arduino and server

Frontend . Development

Next js

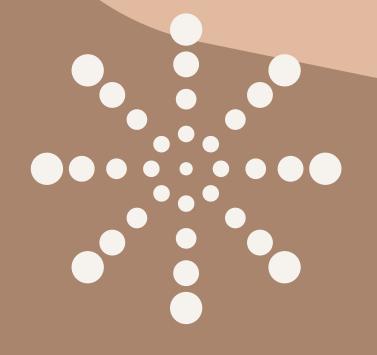
Tailwind

Clerk JS

CSS

Backend Development Flask

Twilio















THE SUB-

MEMBERS:

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