Safe Spark

*The smart lighter*
Everyday nearly 10 people die from accidental deaths caused by gas cylinder/stove fires in India

Our solution is simple but effective

Detect, Warn, and Disengage

1. **DETECT**
   potentially dangerous levels of LP gas near the stove

1. **WARN**
   user of the risk of gas explosion

1. **DISENGAGE**
   the spark mechanism so that the gas is not ignited
Sketch Model

- MQ-3 propane gas sensor
- Arduino Nano
Final Experimental Results

The model was able to effectively detect LP gas emitted from a commercially operated gas stove at a range of distances.

![Graph showing voltage over time](image)
Next Steps

Sensor integration into lighter system

![Graph showing Voltage vs Time with a highlighted Safe ignition window]