



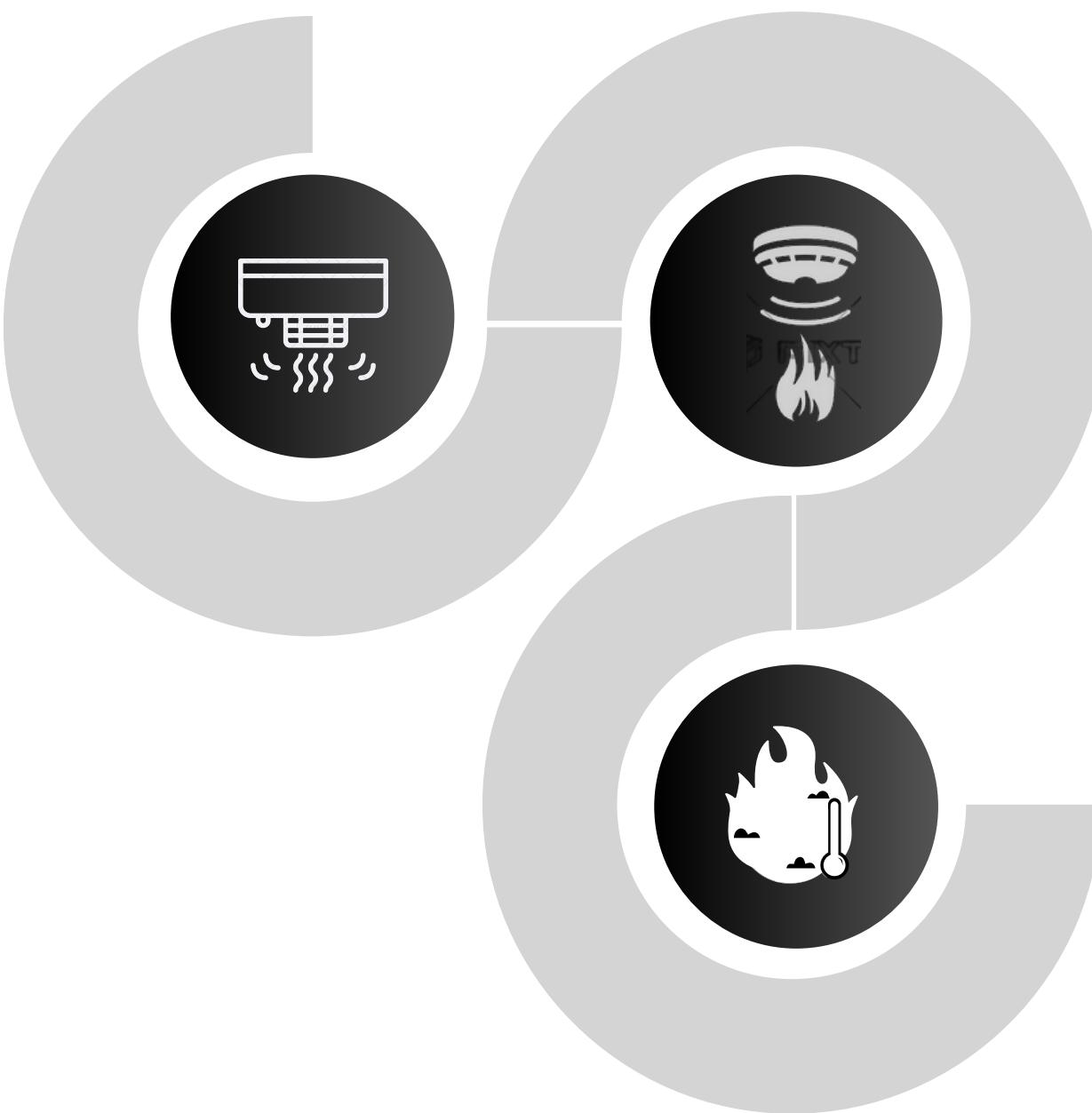
FIRE DETECTION AUTOMATIC PREVENTION

“ENHANCING SAFETY THROUGH EARLY DETECTION”

HOW FIRE DETECTION ENHANCES SAFETY

- 01** The fire detection system monitors for fire presence, enabling manual or automatic control actions to prevent escalation, reduce exposure risk, and minimize fire damage.

- 02** Fire detection systems integrate with safety functions like ventilation, shutdown systems, depressurization, fire protection, explosion barriers, power backup, and alarms.



WHY FIRE DETECTION IS ESSENTIAL

Fire detection systems identify fires early, enabling quick response to reduce risks, save lives, and limit damage. Fire alarms provide crucial warnings to occupants during emergencies

SAVE LIVES



MINIMIZE PROPERTY DAMAGE

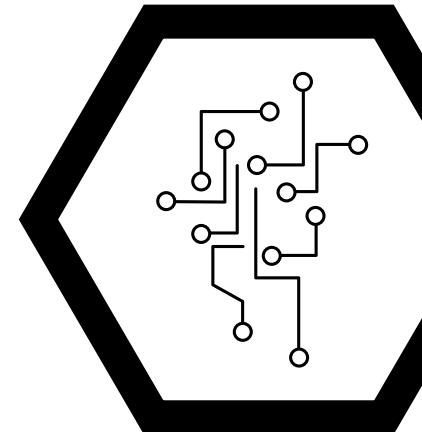


SPEED UP RECOVERY



CONCEPT OF INSTALLATION

Sensors (flame, gas, and temperature) are installed in high-risk areas to detect fire and smoke early.



Sensors connect to an Arduino-based control unit, which activates alarms, and the water pump when fire is detected.

The system triggers a buzzer, and activates a water sprinkler to control the fire automatically.



SENSORS IN OUR FIRE DETECTION SYSTEM

FLAME SENSOR (IR SENSOR)

Detects direct fire & triggers alarms



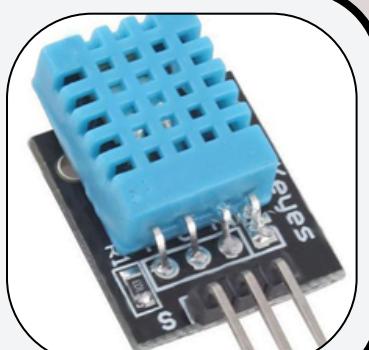
GAS SENSOR (MQ-2)

Identifies smoke or gas leaks, ensuring early detection



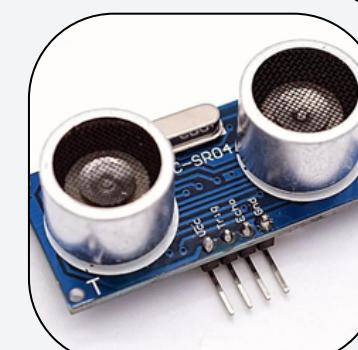
TEMPERATURE SENSOR (DHT11)

Monitors sudden temperature rises

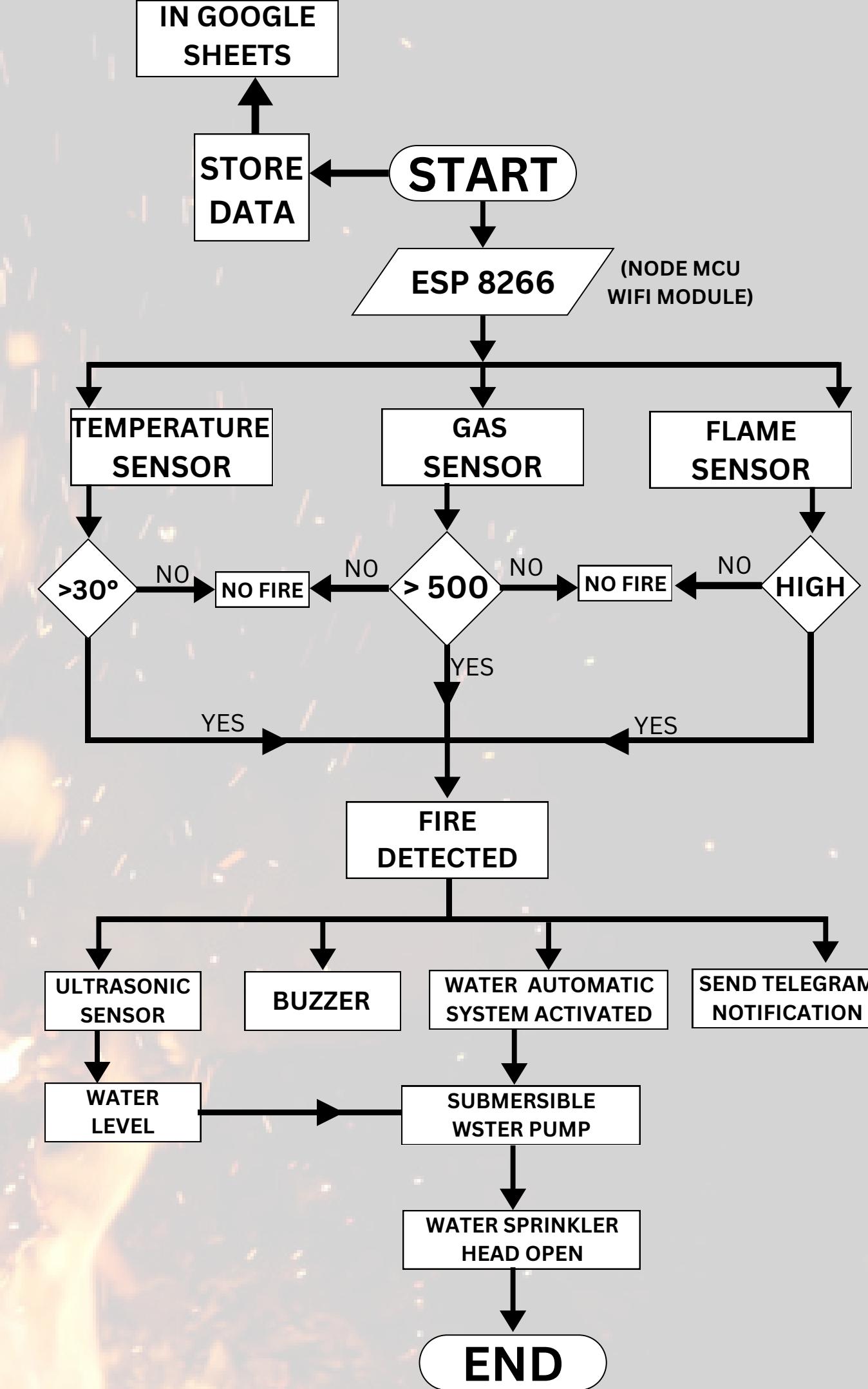


ULTRASONIC SENSOR

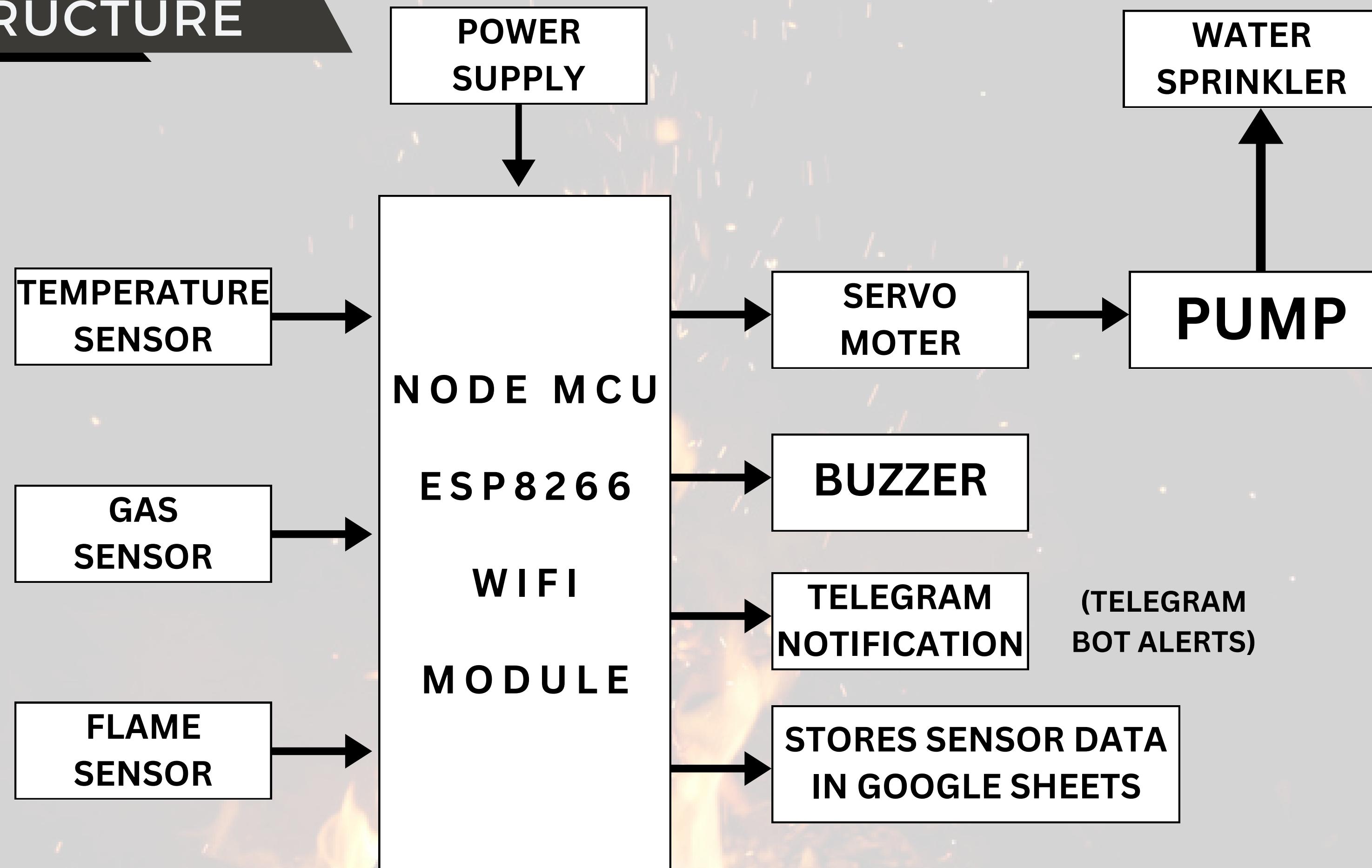
Detect water level from water tank



FLOWCHART OF PROPOSED SYSTEM



BLOCK DIAGRAM OF STRUCTURE





STATISTICS

Only 40% of people are aware of fire safety, while 60% remain unaware

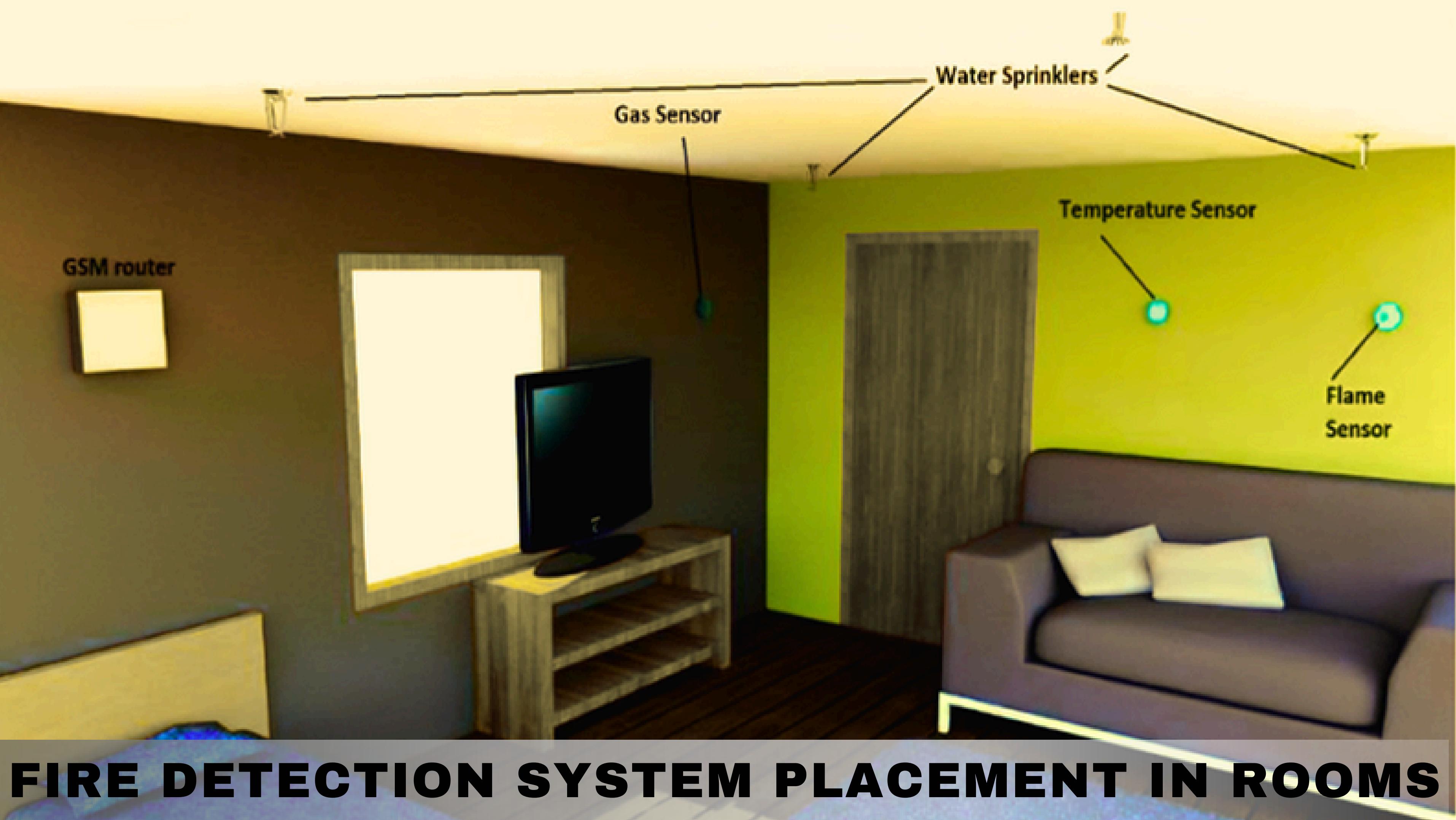


40%



60%





CONCLUSION

Fire detection systems are essential for early warning, reducing fire damage, and saving lives. Their integration with suppression systems and remote monitoring enhances safety and efficiency.

Advancements in fire detection technology continue to improve reliability. Widespread adoption is crucial for protecting communities, ensuring safety compliance, and preventing loss of life and property.



“ENHANCING SAFETY THROUGH EARLY DETECTION”



THANK YOU FOR WATCHING

