SMART FIRE DETECTION SYSTEM

WHY SPEND OUR TIME DOING THIS?

Current fire safety systems are hardwired : Each fire detecting unit is connected to each other by physical wiring.

Data of Fire is Centralized : Fire Control Panel is the only point where limited data regarding the location of fire is known. (People stuck in the building have no clue)

Multiple Points of Failure : If physical wiring is damaged in one place, an entire section of fire detection modules fail.

Cannot help in evacuation of victims : Nobody can estimate where the fire is going, or which areas of the building are "High Risk Zones".

WHAT IS A HIGH-RISK ZONE?

- AREAS OF THE BUILDING WHICH HAVE FLAMABLE GASES IN THE AIR
- AREAS WHICH ARE AT A HIGH RISK OF BURNING DOWN
- AREAS WHICH ARE FILLED WITH SMOKE OR WILL FILL UP WITH SMOKE

SMOKE KILLS MORE PEOPLE THAN FIRE

WHY SPEND OUR TIME DOING THIS?

- More people lose their lives by inhaling toxic gases while trying to find a safe path out of the fire.

- **We solve this issue**

- **Classical Fire Detection Systems do not take this into account at all**

WHAT ARE WE DOING ?

- **REMOVING WIRES**
- **SHARING REAL TIME DATA OF THE FIRE TO RESIDENTS AND FIRE FIGHTERS**
- **HELPING EVACUATION BY CALCULATING A SAFE PATH OUT.**
- **IF NO PATH EXISTS MOVE THEM TO THE SAFEST POSSIBLE AREA IN THE BUILDING**

HOW ARE WE DOING IT ?

- WE HAVE MADE FIRE DETECTING MODULES CONTAINING :
- MQ2, MQ135 (SMOKE,FLAMABLE GAS, AIR QUALITY)
- FLAME SENSOR , DHT SENSOR (TO DETECT FIRE)
- XBEE MODULES (WIRELESS COMMUNICATION TO A MESH NETWORK)

HOW ARE WE DOING IT ?

- WE COLLECT DATA ARRIVING FROM THIS MESH NETWORK.
- SENDING THE DATA TO THE FIREFIGHTERS.
- WE UPLOAD THE DATA TO CLOUD IN A NETWORK SAFEHOUSE.(RASPBERRY PI AND INTERNET CONNECTION)
- WE RUN OUR PATHFINDING ALGORITHMS ON THE CLOUD.
- PEOPLE IN THE BUILDING CAN ACCESS ALL THIS FROM A MOBILE APP.