# Brainstorm & Idea Prioritization

Here we use this template to represent our problem statement and give our ides to prevent that. It gives workers to be work in trustable field. It helps to save so many peoples, workers, students and others life from fire Accidents.

### **Problem Statement**

Without a Problem we can't get any inventions. Inventions are based on problems which we are faced in our daily life. Here we Take one problem in our day to day life and represent our ides.

Fire Detection Systems are now widely used in various safety and security applications. The major amount of fires tarts due to the electric short circuit. It leads to damage to property and also loss of life. To avoid that or to minimize the damage caused by fire

outbreaks due to electric short circuits an IoTtechnology is used to control such a kind risk. Traditional fire detection systems are not that effective and quick to alert the owner about fire, in case no one is present on the location. To overcome this problem in this paper we present the design and development of IoT based Fire Detection System. A system that combines qualities for fire, temperature and smoke detection, sendingalert Text Message about the fire to the user along with onsite alarm(buzzer), updating temperature, humidity and smoke on ThingSpeak cloud every 15seconds, and it also moves manually with the help of Android Application. The Fire Detection System consists of four main parts: Multiple sensors, communication system (Bluetooth, GSM, NodeMCU), motion planning (Manual patrolling), and Android application for manual patrolling of the system. This Fire Detection system can be used in

### Brainstorm

By understanding our problem statement some Ideas that come to my mind that address our problem statement.

## Dhinesh P Karthikeyan

egular fire and evacuation drills	Storage of flammable materials in a safe area	Fire alarms tested and maintained periodically	Early detection using smoke sensor	Installing automated chamber locking	Updating temperature, humidity, and smoke on IBM cloud platform at periodic intervals
ystematic oproach for nonitoring nd control	Storage area equipped with a sprinkler and asmoke alarm	Emergency alerts are notified to fire station and authorities	Sending alert text message about the fire to the user along with onsite alarms	Electrical fittings must be properly maintained	Maintenance of the emergency lighting
o get real life data using IOT echnology	Python code for publishing random sensor data	Using Fire retardant materials for interior design	To provide a low cost fire alarm system	MAKE SPECIAL ROOM FOR FIRE MANAGEMENMT	Creating an Webapp to monitor the temperature, gas and Flame

# Dharshna bala G

Existence of emergency population warning methods	transferring messages through wireless technologies	Put up signs and contact information for emergencies	Provision of clear signage indicating exist routs and location of fire safety equipments	Software deigned to with stand harsh industrial conditions	Water tank with separate piping with hose reed to all the floors
reate node red flow to et data from devices	Creating an Emergency fre exit	If flame is detected sprinklers will be switched on automatically	Multi sensors are used to detect any changes in the environment	USE SPECIAL BLANKET FOR INSTANT FIRE	If any gases are present the exis fans are powered on
Usage of Gas Detection system	Android application for manual patrolling of the system	Implementing adequate number of fire extinguishers in each block	PERSONAL EMERGENCY EVACUATION PLAN	Cloudant DB nodes to store the recieved sensor data	A web page created to analyze the data and response extract conditionaly to launch water sprinklers

Barath P

## **Brainstorm Group ideas**

Take turns sharing your ideas while clustering similar or related notes as you go. Once all sticky notes have been grouped, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you and break it up into smaller sub-groups.

15 minutes

Maintenance

Storage

flammable

safe area

materials in a

emergency

Water tank with separate piping

with hose reel

all the floors

#### Preventive Measures

Sending alert text message about the fire to the user along with onsite

messages through wireless

Implementing adequate number of fire extinguishers in through wireless

Updating temperature, humidity, and smoke on IBM cloud platform at periodic intervals Electrical fittings must be properly maintained using IOT

Fire alarms tested and maintained periodically

# Prioritize

Priorities given to our project by time

5 minutes

# Importance

If each of these tasks could get done without an which would have the most positive impact Feasibility

Regardless of their importance, which tasks are more feasible than others (Cost, time, effort, complexity,

Applications

Create node application for red flow to get data from patrolling of the system devices

Create node red flow to get data from devices

fittings must be properly

Software deigned to with stand harsh industrial

Systematic approach

application for manual patrolling of the system

application for manual patrolling of the system Python code for publishing random sensor

#### Advantages

Existence of To provide a emergency low cost fire population alarmsystem methods

> emergency warning methods

Connects multiple bulidings

place

Workers to a trustable

To provide a low cost fire alarm

is detected sprinklers

approach for monitoring

fittings must be properly