


# Ideation Phase

## Brainstorm&Idea Prioritization Template

Date	15 September 2022
Team ID	PNT2022TMID48153
Project Name	Emerging methods for Early detection of forest fires
Maximum Marks	4 Marks

### Brainstorm & Idea Prioritization Template:

#### Step-1: Team Gathering, Collaboration and Select the Problem Statement



## Brainstorm & idea prioritization

Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

🕒 10 minutes to prepare  
🗣️ 1 hour to collaborate  
👥 2-8 people recommended

**Before you collaborate**

A little bit of preparation goes a long way with this session. Here's what you need to do to get going.

🕒 10 minutes

**A Team gathering**  
Define who should participate in the session and send an invite. Share relevant information or pre-work ahead.

**B Set the goal**  
Think about the problem you'll be focusing on solving in the brainstorming session.

**C Learn how to use the facilitation tools**  
Use the Facilitation Superpowers to run a happy and productive session.

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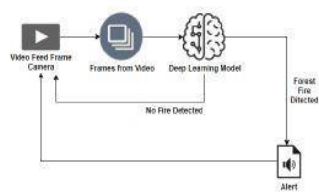
**1 Define your problem statement**

What problem are you trying to solve? Frame your problem as a How Might We statement. This will be the focus of your brainstorm.

🕒 5 minutes

### Emerging Methods For Early Detection Of Forest Fires

Forest fires are a major environmental issue, creating economic and ecological damage while endangering human lives. There are typically about 100,000 wildfires in the United States every year. Over 9 million acres of land have been destroyed due to treacherous wildfires. It is difficult to predict and detect Forest Fire in a sparsely populated forest area and it is more difficult if the prediction is done using ground-based methods like Camera or Video-Based approach. Satellites can be an important source of data prior to and also during the Fire due to its reliability and efficiency. The various real-time forest fire detection and prediction approaches, with the goal of informing the local fire authorities



## Step-2: Brainstorm, Idea Listing and Grouping

### 2 Brainstorm

Write down any ideas that come to mind that address your problem statement.

10 minutes

**Fahmidha**

- Based on Gaussian mixture model
- Image processing

**Dayana**

- Detection using wireless sensor network
- Using Cluster Heads to determine the GPS

**Annapoorani**

- Collecting Data Using Satellite Image
- Implementing Ground Level Sensor for data
- Monitoring the forest Using satellites
- Deep Learning can be used

**Santhi**

- Prediction using machine learning
- Early detection using unmanned Aerial Vehicle
- Utilising Neural network
- Using radio Acoustic Sounding system

### 3 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 can break it up into smaller sub-groups.

20 minutes

**cluster A**

```

graph LR
    A[Early detection using unmanned Aerial vehicles] --> B[Utilising in neural network]
    B --> C[Emerging method like sensor network]
        
```

Based on Gaussian Model

Detection using wireless sensors network

Using cluster to determine GPS

**cluster B**

- Fire detection using CNN model
- Based on Gaussian mixture model
- Monitoring forest fire using satellite

## Step-3: Idea Prioritization

