

Ideation Phase

Brainstorm & Idea Prioritization Template

Date	19 September 2022
Team ID	PNT2022TMID30303
Project Name	EMERGING METHODS FOR EARLY DETECTION OF FOREST FIRES
Maximum Marks	4 Marks

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

Template



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

[Share template feedback](#)

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.

[Open article](#)

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

Natural disasters have always been mankind's constant companion since time immemorial. Forest fire is one such disaster which occurs at large scale not only destroys the flora, fauna, vegetation of the forest but also puts the life of human beings and animals at a high risk. Here by utilising artificial intelligence to monitor, detect and deter forest fires in their beginning stage.

Technical Architecture



```
graph LR; A[Video Feed Frame Camera] --> B[Frames from Video]; B --> C[Deep Learning Model]; C --> D[Forest Fire Detected]; C --> E[Alert]; C -- No Fire Detected --> A;
```

Need some inspiration?
See a finished version of this template to kickstart your work.

[Open example](#)

Step-2: Brainstorm, Idea Listing and Grouping

2



Brainstorm
Write down any ideas that come to mind that address your problem statement.
[10 minutes](#)

Shyam V
Based on Gaussian mixture model
Emerging methods like LoRaWAN Sensor Networks
Using Image Processing
Fire Detection Using XBee

Dhinakaran K
Collecting data, Using drones flying over the forest
Monitoring the forest Using satellites
Implementing Ground Level Sensors for data
Deep learning can be used

Santhosh S
Detection using Wireless Sensor Networks
Using Optical smoke, Gas and Microwave sensors
Using Cluster Heads to determine the GPS coordinates
Using Optical Sensor and Digital camera

Revathy V
Prediction using machine learning
Early detection using Unmanned Aerial Vehicles
Utilising Neural networks
Using Radio-Acoustic sounding system






3

Group ideas
Take turns sharing your ideas while clustering similar or related notes as you go. In the last 10 minutes, 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
Collecting data, Using drones flying over the forest
Based on Gaussian mixture model
Detection using Wireless Sensor Networks
Using Cluster Heads to determine the GPS coordinates
Prediction using machine learning
Early detection using Unmanned Aerial Vehicles
Utilising Neural networks
Emerging methods like LoRaWAN Sensor Networks

CLUSTER B
Fire Detection Using XBee
Using Radio-Acoustic sounding system
Using Optical Sensor and Digital camera
Implementing Ground Level Sensors for data
Implementing Ground Level Sensors for data
Using Optical smoke, Gas and Microwave sensors
Monitoring the forest Using satellites
Based on Gaussian mixture model



Step-3: Idea Prioritization

4

Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

🕒 20 minutes

