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

In Forest, due to friction of trees there occur Forest Fire in summer and autumn and before happening Forest Fire we want emerging system to get quick information for taking action to avoid Forest Fire as soon as possible.
In autumn season, the Fire is spread one tree to another by touching their branches.

Key rules of brainstorming

To run an smooth and productive session

- Stay in topic.
- Encourage wild ideas.
- Defer judgment.
- Listen to others.
- Go for volume.
- If possible, be visual.

2

Brainstorm

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

10 minutes

TIP
You can select a sticky note and hit the pencil [switch to sketch] icon to start drawing!

HEMANANTH P

contribution to the Forest Fire Fighting strategy, providing critical data to improve their safety and efficiency

early detection of Forest Fires, alarm management, and real time reporting about the Fire evolutio

A "deploy and Forget" policy. Nodes will not need any kind of maintenance or battery recharging

MOHAMMAD ANAS A

The various real-time Forest Fire detection and prediction approaches, with the goal of informing the local Fire authorities.

search messages: search for an initial node link

specific data messages, messages containing sensor data in response to a higher level node request

MOHAMMAD KATHAR MOHAIDEEN A

An efficient and robust 3D modeling is used to augment the accuracy of the detection.

Usage of the satellite images to observe, detect, and report Fire events

New requirements in the ecological environment arise due to the expeditious development of society.

JEYASHEELAN J

Continuous information about the status of the forest could not be obtained due to the restrictions in the monitoring of forests

Collisions are avoided, and the obstacles such as birds, trees, poles, and so on in the Forest Farms are detected

Advanced features such as pathway planning and depth deployment are included and play a crucial role in autonomous navigation

HARIHARAN S

There is no need for the exposure of humans to perilous activities when remote sensing is deployed

Implementation of the wireless sensor networks to observe the Fire events exist in all areas

Weather might not be stable in all situations as it might vary, and thus, it results in the collection of noisy images

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 and break it up into smaller sub-groups.

20 minutes

TIP
Add customizable tags to sticky notes to make it easier to find, browse, organize, and categorize important ideas as themes within your mural.

Image recognition:

Observation subsystem consists of a network of sensor stations and a central station that are interconnected by telecommunications network

Sensory stations transfer the data from the cameras to the central station for further analysis. The operator in the command operations center checks the signal obtained from thermal (infrared)

Frames from video:

The fire detect by red color than normal color of yellow and green conndition

one fire region can slowly break into several small parts, or the small fires can burn into one region, matching algorithm has the ability to detect such changes.

Deep learning model:

Presenting a framework for active fire detection based on deep learning called active-fire-net (Fire-Net)

High efficiency against detection of small fires using freely available data

Accurate and automatic detection of active fires with the potential of being applied as real time

Alert:

The web application can be accessed on the computers of all emergency offices. The information of the fire in the forest and the fire accident can be accessed from this application.

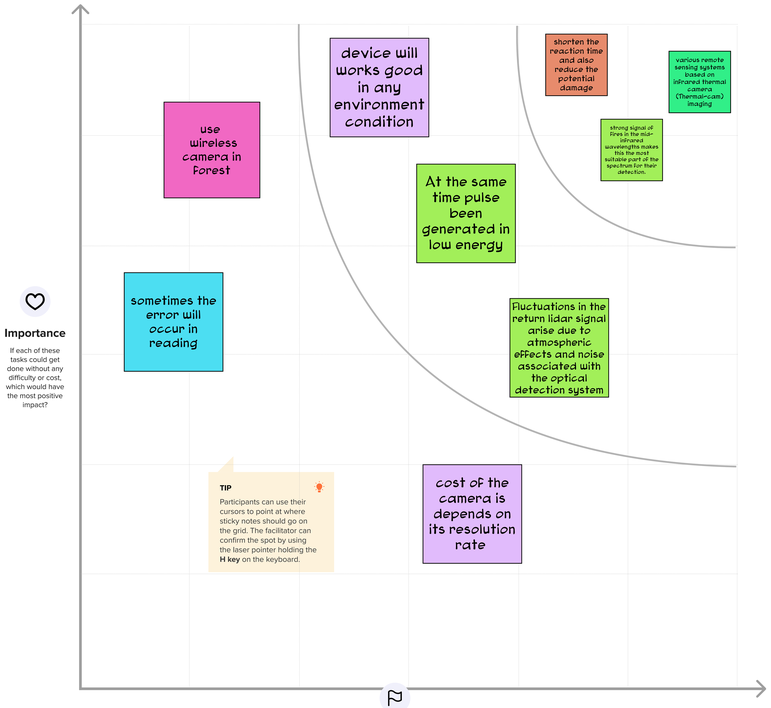
This application will also be connected to the database of the forest PC. There will be information regarding temperature in the form of a graph

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



TIP
Participants can use their cursors to point at where sticky notes should go on the grid. The facilitator can confirm the spot by using the laser pointer holding the **H key** on the keyboard.