

Ideation Phase

Brainstorm&IdeaPrioritization Template


Date	25 September 2022
TeamID	Team-592145
ProjectName	Deep Learning Model For Detecting Diseases In Tea Leaves
MaximumMarks	4Marks

Brainstorm & idea prioritization:

Reference:

<https://app.mural.co/t/detectingdiseaseoftealeaves6738/m/detectingdiseaseoftealeaves6738/1698244764744/ce8c29e038c3255cb0b3a70c81ead9f47b7e17fa?sender=ub98e003bacf53de2c4203614>

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

PROBLEM

How might we [your problem statement]?

Key rules of brainstorming

To run a smooth and productive session

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

Step-2: Brainstorm, Idea Listing and Grouping

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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!

Person 1

Establishing research centers of tea leaves
Creating tea leaves report
pest and disease management
disease progression monitoring
historical data analysis
Providing awareness camps for farmers

Person 2

Smartphone app for farmers
Low cost hardware solutions
weather data integration
providing all languages in apps
collaborating with environmental organizations
providing subsidies

Person 3

Develop early warning system
app should be built in simple structure
collaborating with research institutions
Creating agricultural disease management tool
Creating laboratory for diseased leaves
Allowing farmers to cultivate multi cropping system

Person 4

Creating an offline mode app
maintain data collection
Examine the appearance of tea leaves
Watch unusual growth patterns of leaves
Early detection and proper management of diseases
Digging wells for water purpose

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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.

🕒 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.

App Building for tea leaves

Smartphone app for farmers
providing all languages in apps
app should be built in simple structure
Creating an offline mode app
Creating agricultural disease management tool

Collaboration with Institutions

collaborating with environmental organizations
Creating laboratory for diseased leaves
collaborating with research institutions

Awareness among farmers

Establishing research centers of tea leaves
Providing awareness camps for farmers
providing subsidies
Digging wells for water purpose
Allowing farmers to cultivate multi cropping system

Examine the tea leaves

Watch unusual growth patterns of leaves
Examine the appearance of tea leaves
maintain data collection
Early detection and proper management of diseases
Develop early warning system

Monitoring and Report

Creating tea leaves report
pest and disease management
Creating tea leaves report
disease progression monitoring
Low cost hardware solutions
weather data integration

Step-3: Idea Prioritization

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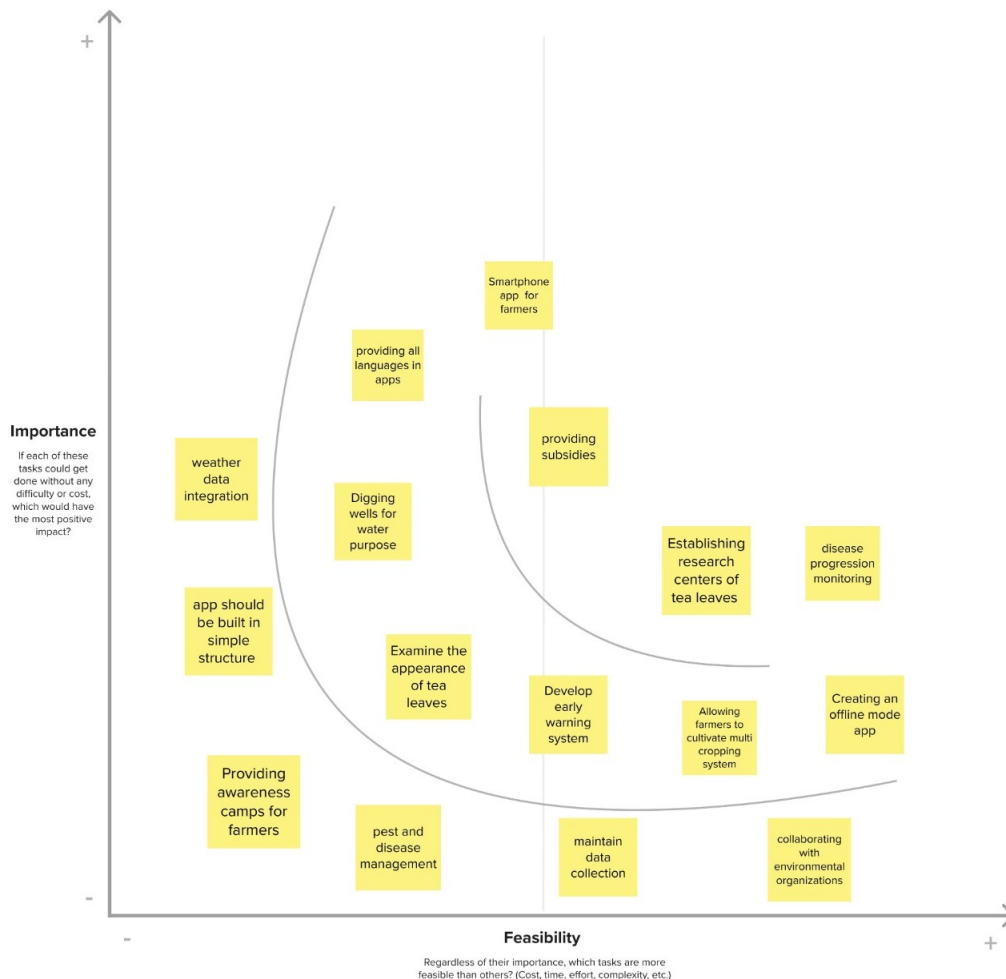
Prioritize

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.



High Priority: The primary focus should be on developing an effective disease detection algorithm, the other most critical aspect is the selection and training of the deep learning model. This could involve traditional image processing techniques using an appropriate model like Convolutional Neural Networks (CNN) for image recognition tasks, such as color analysis, texture analysis, and shape analysis. It's also crucial to consider the accuracy, precision, recall, and F1 score of the model during evaluation. The algorithm should be able to accurately identify common diseases from images of tea leaves, also building the research centers depending on the crop yield area of tea leaves, this can improve the awareness and skills about tea leaves farming.

Medium Priority: The next priority is implementing this algorithm into a user-friendly mobile application. The app should allow users to easily upload or capture images of their tea leaves and receive a quick and accurate diagnosis. It can become very user friendly when we have it in the offline mode so it can work in any environmental weather regardless of mobile signals which is very helpful for farmers when they are examining the pictures in any field/area along with the local languages identified by the gps location. This mobile application also provides information about the identified disease and possible treatments, it can also keep updating the reports, if possible it will give the early warning messages as their requirements.

Low Priority: Lastly, attention should be given to educating the users and marketing the app. Users need to understand how to use the app effectively and capture good quality images for analysis, to make it possible the mobile application will be made in a simple structure. The organizations will be built and collaboration with the environmental organizations in the surroundings areas to bring awareness and helping the marketing strategy in reaching out to potential users, which are likely to be tea growers and agricultural scientists. This applications will share about the weather integration data and it keep up-to- date about pest management to farmers and maintains the data and it secures the collected data.