

## Ideation Phase


### Brainstorm & Idea Prioritization Template

Date	19 September 2023
Team ID	Team-592199
Project Name	Disease Prediction Using Machine Learning
Maximum Marks	4 Marks

#### Brainstorm & Idea Prioritization Template:

Brainstorming provides a free and open environment that encourages everyone within a team to participate in the creative thinking process that leads to problem solving. Prioritizing volume over value, out-of-the-box ideas are welcome and built upon, and all participants are encouraged to collaborate, helping each other develop a rich amount of creative solutions.

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



### Brainstorm & idea prioritization

American Sign Language prediction using alphabet images with Deep learning

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

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#### 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

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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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#### 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

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#### Problem Statement

How might we develop a machine learning model capable of predicting up to 42 diseases based on user-input symptoms, providing a user-friendly web application that enables timely and accurate preliminary assessments? This model aims to bridge the gap between the onset of symptoms and professional medical advice, serving both as a tool for online consultations with healthcare professionals and empowering users for preventive self-diagnosis. The solution ensures user privacy by not requiring personal data and emphasizes transparency, interpretability, and ethical considerations.

#### Challenges

Data Quality and Diversity

Algorithm Robustness

Interpretability and Explainability

Integration with Healthcare Systems

Continuous Model Improvement

User Engagement and Education

## 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 icon to start drawing.

#### Thiran

Create an intuitive and interactive symptom input interface to enhance user experience. Allow users to input symptoms through voice recognition for accessibility.

Implement a feature that enables real-time collaboration between users and healthcare professionals for immediate guidance.

Provide personalized health recommendations based on the predicted diseases, including lifestyle changes and preventive measures.

Explore integration with smart wearables to gather real-time health data, enhancing the model's accuracy and predictive capabilities.

#### Geethika

Allow users to scale the severity of their symptoms, providing a more nuanced input for the model.

Implement a continuous learning model that adapts and improves over time with user feedback and evolving health data.

Prioritize inclusive design by incorporating accessibility features for users with disabilities.

Incorporate regional health trends and considerations to improve the model's accuracy for specific demographics.

#### Shoaib

Develop an offline version of the symptom checker for users in areas with limited internet connectivity.

Provide multilingual support to cater to a diverse user base, ensuring accessibility for non-English speakers.

Integrate emergency response features for critical situations, guiding users on immediate actions before professional help arrives.

Establish a user feedback loop for continuous improvement, allowing users to provide insights on the model's accuracy and suggestions for enhancement.

#### Chandra

Collaborate with non-governmental organizations (NGOs) to reach underserved communities and provide healthcare resources.

Integrate educational content to help users understand symptoms, diseases, and the importance of professional medical consultation.

Offer resources and guides to improve health literacy, empowering users to make informed decisions about their well-being.

Create community health challenges to encourage healthy behaviors and foster a sense of community support.

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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 can 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 they're within your mind.

Create an intuitive and interactive symptom input interface to enhance user experience. Allow users to input symptoms through voice recognition for accessibility.

Establish a user feedback loop for continuous improvement, allowing users to provide insights on the model's accuracy and suggestions for enhancement.

Provide personalized health recommendations based on the predicted diseases, including lifestyle changes and preventive measures.

Integrate educational content to help users understand symptoms, diseases, and the importance of professional medical consultation.

Provide multilingual support to cater to a diverse user base, ensuring accessibility for non-English speakers.

Develop an offline version of the symptom checker for users in areas with limited internet connectivity.

Integrate emergency response features for critical situations, guiding users on immediate actions before professional help arrives.

### Step-3: Idea Prioritization

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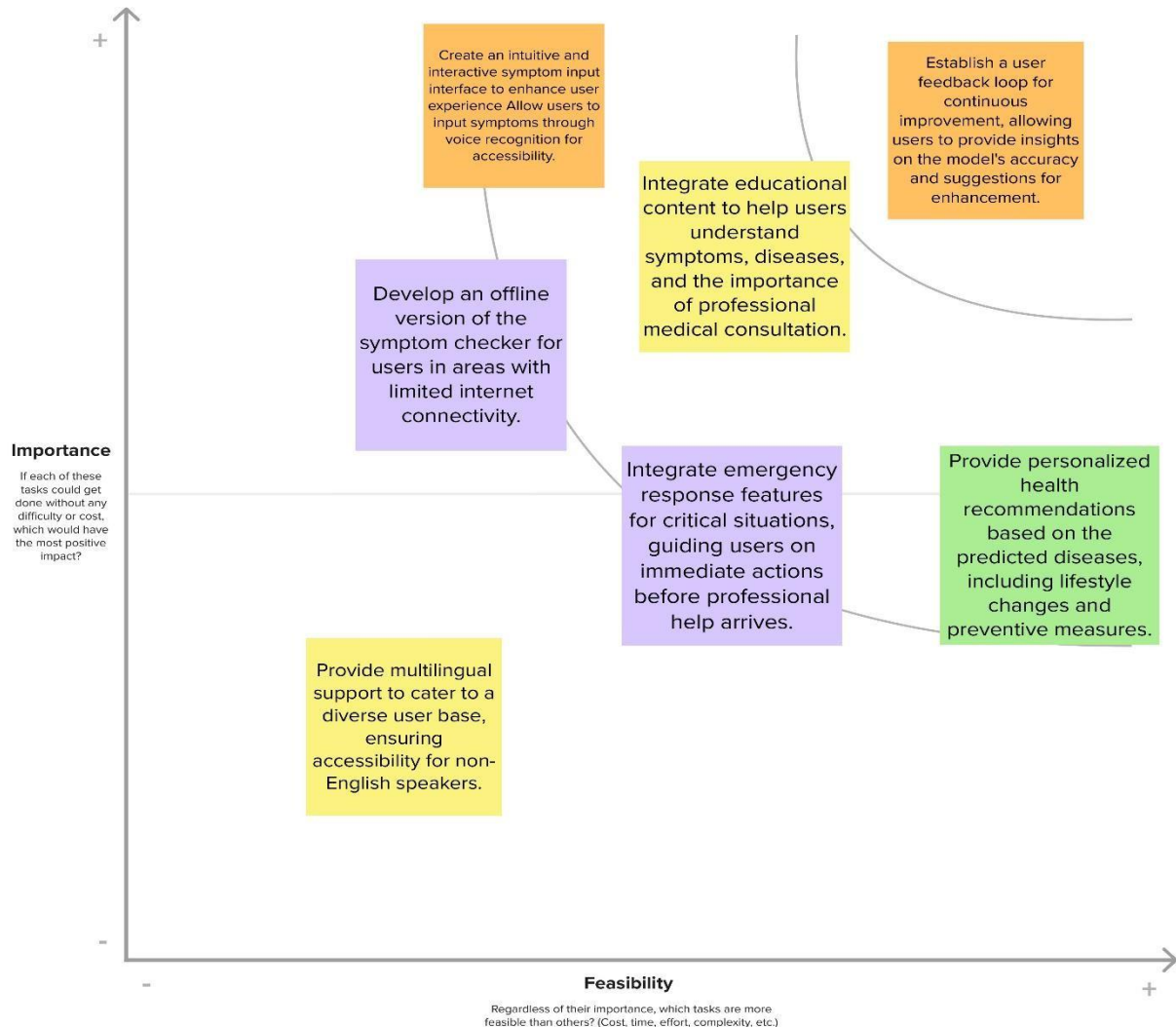
#### Prioritize

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.



Reference link(Our mural)-

<https://app.mural.co/t/aslamericansignlanguagerecog2280/m/aslamericansignlanguagerecog2280/1698657838622/02a3acb2c68b344ed7290083be0242d2891b6065?sender=u4399bb3d76a851d814940893>