


# Ideation Phase

## Brainstorm & Idea Prioritization Template

Date	19 September 2022
Team ID	PNT2022TMID05881
Project Name	Detecting Parkinson's Disease using Machine Learning
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

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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.

[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

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**PROBLEM**

**How might we [your problem statement]?**

People with parkinsonism generally have problem of balance, difficulty in speaking or tremors in one hand. These are the common issue faced by so many people in the world, especially geriatric aged.

**Key rules of brainstorming**

To run a smooth and productive session

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

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

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.

Should look into the research papers available.

The data sets must be precise and accurate.

Machine learning techniques include XG Boost.

XG Boost Algorithms to diagnose PD with new learning methods.

Factors about the disease be analyzed

XG Boost Algorithm Scalable and Highly Accurate

Learning required process about disease

We can refer the machine learning techniques.

The XG Boost algorithm super charges gradient boosting tasks.

Algorithm can produce billions of outcomes quickly.

Subapriya M

Vaishnavi S

Random forest method include to the machine learning.

Random forest classifier was used to classify parkinson patients

PD is measured by using MRI Scan

SPFECT Technique can help super support diagnose the PD

Supervised learning method is working based this method.

The 80% of PD is Diagnosed by using new MRI

Supervised learning method is used, introduce the multi sensor sensor data.

multi sensor data used to detect the PD disease

PET Scan is used to confirm a diagnosis of PD

EMG Tremor analysis is used to identify PD

Thareni Sree M

Shanmugapriya G

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 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.

Algorithms & Models

Sensors

Data Sets

ML Score Estimation

Symptoms

Types

ML Methods

Treatment Approache

Adaptive Boosting TTP  
Algorithm Deep Brain Stimulation using Markovs model Linear discriminant Algorithm XBoost Algorithm

VOC sensors timed up and go inertial sensors wearable sensors

Gait signal data set key stroke feature MRI data sets

UDPRS score finger tremor quantification Hoen and Yahr's scale

Symptoms includes; Tremors ,slow movement, speech changes ,writing changes, Rigid changes.

Idiopathic Parkinson's Vascular Parkinson's Drug-induced Parkinson's

Neural networks PD detection using nocturnal breathing computer visionPD detection using facial expression.

Three surgical procedure are performed to treat the PD Destructive ,Stimulation, Deep brain Surgery.

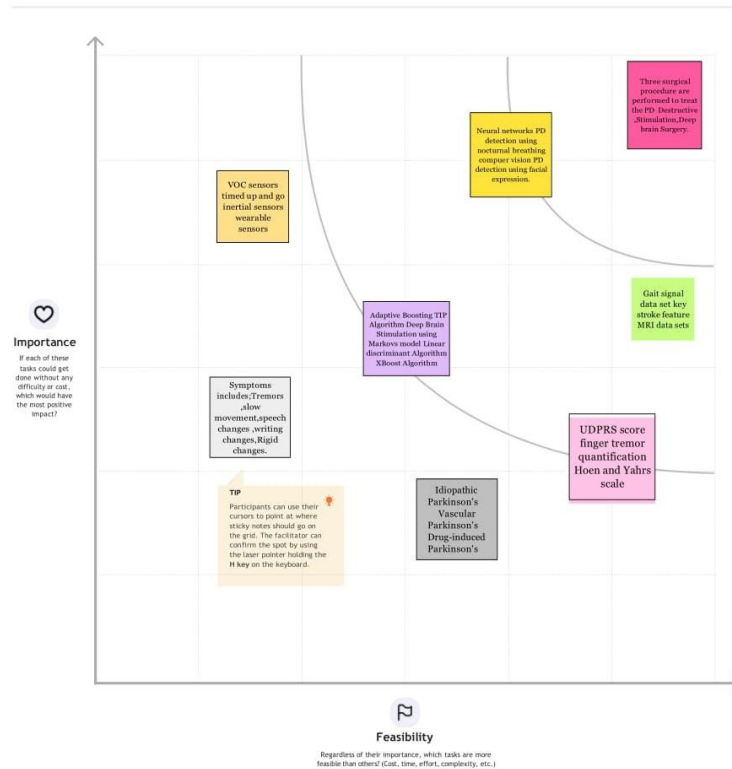
## Step-3: Idea Prioritization

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.

10 minutes



5

### After you collaborate

You can export the mural as an image or pdf to share with members of your company who might find it helpful.

#### Quick add-ons

- A Share the mural**  
Share a view link to the mural with stakeholders to keep them in the loop about the outcomes of the session.
- B Export the mural**  
Export a copy of the mural as a PNG or PDF to attach to emails, include in slides, or save in your drive.

#### Keep moving forward

- Strategy blueprint**  
Define the components of a new idea or strategy.  
[Open the template](#)
- Customer experience journey map**  
Understand customer needs, motivations, and obstacles for an experience.  
[Open the template](#)
- Strengths, weaknesses, opportunities & threats**  
Identify strengths, weaknesses, opportunities, and threats (SWOT) to develop a plan.  
[Open the template](#)

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