

## Ideation Phase

### Brainstorm & Idea Prioritization Template

Date	19 September 2022
Team ID	PNT2022TMID01260
Project Name	Early Detection Of Chronic Kidney Disease 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.

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.

Reference: <https://www.mural.co/templates/empathy-map-canvas>

## 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
- 👤 2-9 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.

[Open article](#) →

### 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

#### 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 (which to sketch) icon to start drawing!

#### barathkumar

- early detection can help health care workers prevent or any serious consequence of ckd
- creating awareness about ckd and the risk it poses so that the public is better informed
- find a way measure gfr effectively as it is the best test to measure the level of kidney function and determine the stage
- to include test for gfr/ckd in regular health checkups to detect any risk as soon as possible

#### arunkumar

- early detection can help health care workers to prevent or delay any serious consequence of ckd
- creating awareness about ckd and risk it poses so that the public is better informed
- finding a way to measure GFR effectively as it is the best test to measure your level of kidney
- to include test for GFR/CKD in regular health checkups to detect any risk as soon as possible

#### avinash

- using machine learning model to classify if a person is at the risk of ckd
- to build an application that allow users to easily enter detail
- it is very important to sub group of the population who are prone to the problem of ckd
- analysing other non medical factors such as sociodemographic status

#### fenix raja singh

- undiscovered or late detection of ckd can lead to serious sequelae including kidney failure, cardiovascular disease
- using different machine learning models to see which can give maximum accuracy such as random forest
- to try and minimize the need of laboratory tests to detect ckd preliminarily if absolutely needed to try
- the entire process should be made cost effective

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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 themes within your mural.

#### Early detection >

- Early detection can help health care workers prevent or delay any serious consequence of ckd
- Undiscovered or late detection of ckd can lead to serious sequelae, including kidney failure, cardiovascular disease, and premature death.
- It is important to identify the subgroup of population who are more prone to CKD for effective diagnosis

#### Factors affecting >

- Analysing other non medical factors such as Sociodemographic status, family history etc. This can allow for even earlier detection of CKD
- Finding a way to measure GFR effectively as it is the best test to measure your level of kidney function and determine your stage of chronic kidney disease
- Other factors affecting CKD directly must be identified, such as Diabetes, smoking, Hypertension etc

#### Making Diagnosis easier:-

- Since CKD has no symptoms or it is so severe even it doesn't show any disease specific symptoms, we need to explore using old CKD patient data to train predicting model
- To try and minimize the need of laboratory tests to detect CKD preliminarily if absolutely needed to try at least up these process and make them more accessible to all users
- The entire process should be made cost effective

#### Using ML for early detection:-

- Using different machine learning models to see which can give maximum accuracy such as Random forest, Decision Tree, SVM etc
- The patient enters the parameters into application, the trained model is run based on the given parameters and a result obtained is presented to the user
- Using Machine learning Model to classify a given person if at risk of CKD or not

#### Creating awareness for prevention:-

- Creating awareness about CKD and the risk it poses so that the public is better informed
- To include tests for GFR/CKD in regular health checkups to detect any risk as soon as possible. Healthcare professionals should also advocate for healthier lifestyle habits that can help avoid CKD

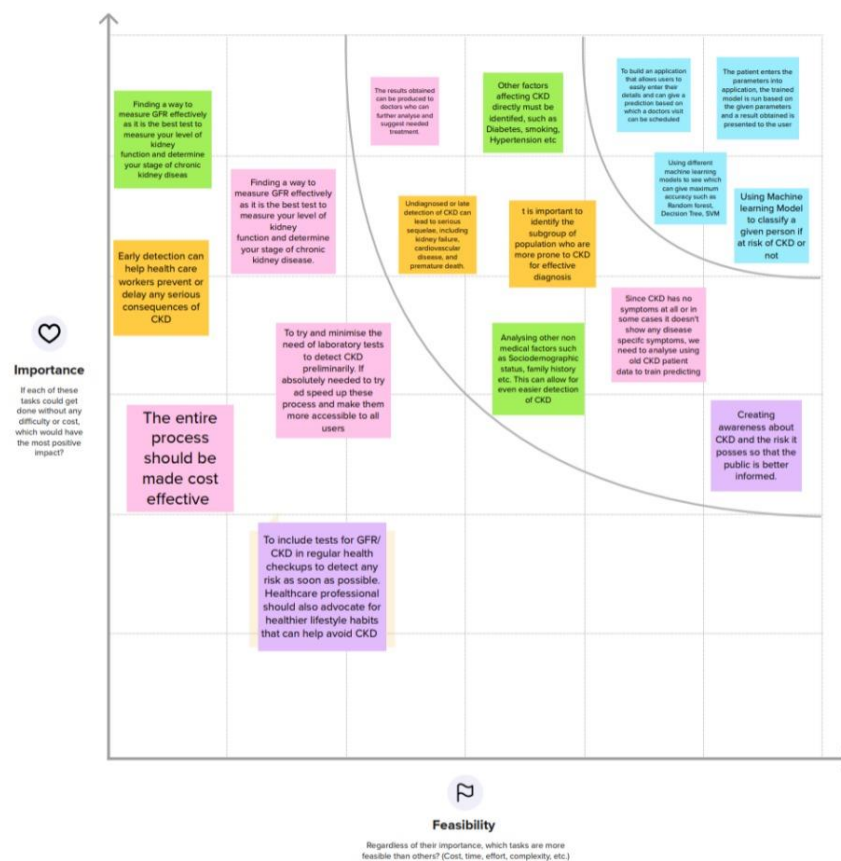
## Step-3: Idea Prioritization

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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



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### 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

- Share the mural**  
Share a view link to the mural with stakeholders to keep them in the loop about the outcomes of the session.
- 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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