

Ideation Phase


Brainstorm & Idea Prioritization Template

Date	08 November 2022
Team ID	PNT2022TMID46647
Project Name	Classification of Arrhythmia using Deep Learning with 2-D ECG Spectral Image Representation
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

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

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

Arrhythmia is a representative type of CVD that refers to any irregular change from the normal heart rhythms. There are several types of arrhythmia including atrial fibrillation, premature contraction, ventricular fibrillation, and tachycardia. Although a single arrhythmia heartbeat may not have a serious impact on life, continuous arrhythmia beats can result in fatal circumstances. In this project, we build an effective electrocardiogram (ECG) arrhythmia classification method using a convolutional neural network (CNN), in which we classify ECG into seven categories, one being normal and the other six being different types of arrhythmia using deep two-dimensional CNN with grayscale ECG images. We are creating a web application where the user selects the image which is to be classified. The image is fed into the model that is trained and the cited class will be displayed on the webpage.

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

Aruna.K

Start with Sequential type of modeling	Data Collector	

Astalakshmi.G

Accuracy testing	Start with basic interface	Identifying algorithm

Dhanvashini.R

Identifying algorithm	Start with image processing techniques	Image Pre-processing

Divya.N

Identifying about deep learning technique	Write how to build a self application	Testing and testing the model

TIP

You can select a sticky note and hit the pencil (switch to sketch) icon to start drawing!

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 can break it up into smaller sub-groups.

20 minutes

Features

user friendly application	interactive interface	web-browser interface
accuracy	Start with basic interface	

Applications

for healthcare	Real-time monitoring and treatment of patients	Data Collector
identifying activity	Testing and testing the model	

Results

accuracy	easy to understand of reports
Accuracy testing	

TIP

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

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.

🕒 20 minutes

