

## Ideation Phase

Project Name : A Novel Method for Handwritten Digit Recognition System

Team-mates: Muthu Akilesh K

Vinu Gautam M

Ratheesh Varman S P

Nithya Pravin R V

### 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

👤 2-8 people recommended

📄 Share template feedback

### 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

#### PROBLEM

- To classify handwritten digits.
- To take an image of a handwritten digit and determine what that digit and character is.

#### 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

### 2 Brainstorm

Write down any ideas that come to mind that address your problem statement.

10 minutes

**Muthu**

- Contour based character segmentation
- Cartesian Coordinates based digit grouping
- Text auto-formatting using selected standard
- Operator detection and evaluation

**Ratheesh**

- phone number detection using the country code
- Detection of matrix and the values in it
- cheque processing in ATM and bank
- Identifying the prices on the price tags on products which the prices are punched

**Vinu**

- Digit recognition on antiques
- Vehicle number plate recognition
- Help the blind to recognize the currency Value
- Auto recognition of digits of different languages

**Pravin**

- Currency detection using currency symbol
- Depositing money using Deposit form in ATM
- Digitizing the digit records which are hand written
- Improving Hand writing on screen during online classes

### 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

**Handling Financial Information**

- Currency detection using currency symbol
- Help the blind to recognize the currency Value
- Depositing money using Deposit form in ATM
- cheque processing in ATM and bank
- Identifying the prices on the price tags on products which the prices are punched

**Digitizing Physical Documents**

- Digitizing the digit records which are hand written
- Auto recognition of digits of different languages
- Vehicle number plate recognition
- Digit recognition on antiques
- phone number detection using the country code

**Online Education Tools**

- Operator detection and evaluation
- Improving Hand writing on screen during online classes
- Detection of matrix and the values in it
- Cartesian Coordinates based digit grouping

**General Functionality**

- Text auto-formatting using selected standard
- Contour based character segmentation

## 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

**Importance**

If each of these tasks could get done without any difficulty or cost, which would have the most positive impact?

**Feasibility**

Regardless of their importance, which tasks are more feasible than others? (Cost, time, effort, complexity, etc.)