

## Ideation Phase

### Brainstorm & Idea Prioritization Template

Date	22 September 2022
Team ID	
Project Name	A Novel Method for Handwritten Digit Recognition System
Maximum Marks	4 Marks

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

#### PROBLEM

How might we solve the problem of a machine trying to recognize handwritten digits?



#### Key rules of brainstorming

To run an smooth and productive session



Stay in topic.



Encourage wild ideas.



Defer judgment.



Listen to others.



Go for volume.



If possible, be visual.

2

## Brainstorm

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

 10 minutes

### Person 1

the UI can be made such that the user can either upload images or draw in some interface

Machine Learning can be used to train the model.

How can the accuracy be improved?

how can we make our project unique?

what is the impact of this project in society?

### Person 2

How will the user input the handwritten digit to the machine?

which libraries can be used?

make the project unique from existing solutions

can be used to assist blind people also as further improvements in the future?

what can be the efficient/innovating strategy once the product is ready to be launched?

RCNN can be used to train the model.

### Person 3

Which type of input is better - loading images or using real-time drawing?

How to make it more efficient for real-time use?

what is the scope of this project?

collect dataset- images of handwritten digits from people

what is the impact of this project in real-time?

train the model with randomization of the dataset for better results.

### Person 4

How many images are required to train?

How many images are required to test?

How can the project be implemented for real-time use?

the system can be made more efficient by increasing the number of dataset.

Random and Numpy can be used along with other visualization algorithms.

## 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

### Technology aspects

RCNN can be used to train the model.

the system can be made more efficient by increasing the number of dataset.

Pandas and Numpy can be used along with other visualization algorithms.

train the model with randomization of the dataset for better results.

the UI can be made such that the user can either upload images or draw in some interface.

Machine Learning can be used to train the model.

### Data collection

How will the user input the handwritten digit to the machine?

how many images are required to train and test?

Which type of input is better - loading images or using real-time drawing?

collect dataset:- images of handwritten digits from people

### Business aspect

make the project unique from existing solutions

what can be the efficient marketing strategy once the product is ready to be launched?

### Scope and future improvements

How can the project be implemented for real-time use?

what is the impact of this project in real-time?

what is the scope of this project?

what is the impact of this project in society?

can be used to assist blind people also as further improvements in the future?

how can we make our project unique?

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

