

Date	29 April 2023
Team ID	NM2023TMID01052
Project Name	Project- AI Enabled Car Parking using Open CV
Maximum Mark	4 Marks

Brainstorming is the process of generating a large number of ideas and solutions to a problem or challenge. Prioritization, on the other hand, involves ranking and evaluating these ideas in order to determine which ones are the most promising or feasible.

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

Team gathering

Define who should participate in the session and send an invite. Share relevant information or pre-work ahead.

Set the goal

Think about the problem you'll be focusing on solving in the brainstorming session.

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

Develop an AI enabled car parking system using openCV that can accurately detect and track vehicles entering and exiting a parking lot and provide real-time information about available parking spaces

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.

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 "fit the pencil" (switch to search) icon to start drawing!

Person 1

The system could use computer vision and machine learning algorithms to detect available parking spaces and direct cars to them. This could reduce congestion and improve the efficiency of parking.

The system could use OpenCV to automatically detect the duration of a car's stay and charge the appropriate amount.

The system should be able to accurately identify the type of vehicle (car, truck, motorcycle, etc.) and assign it to the appropriate parking spot.

Person 2

The AI-enabled car parking system can analyze the visual images of the parking lot and recognize license plates, vehicle make, and model, which can be used for parking management, security, or billing purposes.

Person 3

Once you've detected vehicles, you'll need to analyze the parking spaces to determine if they are available or occupied.

The system should be scalable, allowing for easy expansion to larger parking lots or multiple parking facilities.

The AI-enabled car parking system can integrate with other smart city systems.

Person 4

The system should be able to generate reports and analytics on parking lot usage, helping to optimize parking space utilization and revenue generation.

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

TIP

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

This system should guide drivers to empty lot to reduce congestion

The system should provide alerts to parking lot attendants or security personnel in case of unauthorized vehicles or suspicious behavior

License plate recognition:
The system could use OpenCV to read license plates and match them to a database of authorized vehicles, helping to prevent unauthorized parking and improve security.

The system could use OpenCV to monitor parking space occupancy in real-time. This could help drivers find available parking spaces quickly and easily.

Step-3: Idea Prioritization

4

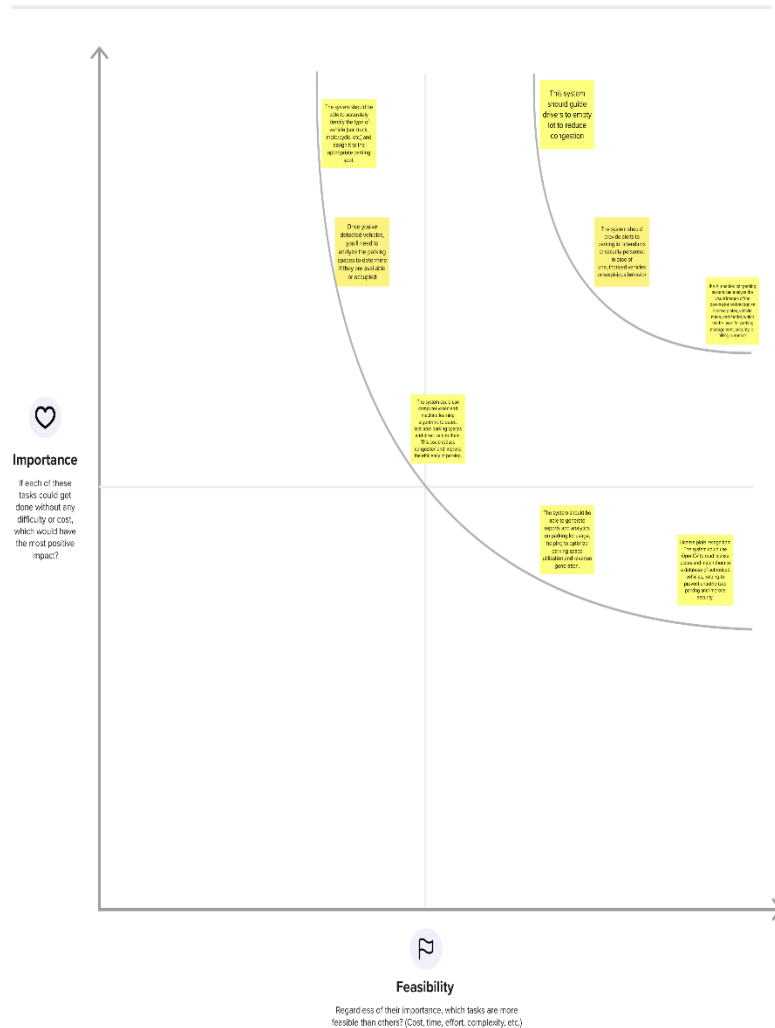
Prioritize

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

TIP

Participants can use their cursors to point at where sticky notes should go on the grid. The facilitator can confirm the spot by using the user pointer holding the **H** key on the keyboard.



→

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 →](#)

[Share template feedback](#)