

Ideation Phase

Brainstorm & Idea Prioritization Template

Date	12 November 2023
Team ID	Team-591796
Project Name	AI Enable car parking using OpenCV
Maximum Marks	4 Marks

Brainstorm & Idea Prioritization Template:


Brainstorming fosters a collaborative and inclusive atmosphere where all team members are invited to contribute their out-of-the-box ideas, prioritizing quantity over quality, and building upon each other's suggestions to generate a wealth of creative solutions.

My Brainstorm & Idea Prioritization Access

Link: <https://app.mural.co/t/srikal4191/m/srikal4191/1699949428681/109e18b669a864765056f02e3b6ae60cc84a273b?sender=u7813f16c4d3adcdd871f0765>

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

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

➔

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](#) ➔

Project - AI Enable car parking using OpenCV

Team ID : Team-591796
Team Size : 1
Team Leader : SRIKAL KAKULA

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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

The existing parking management systems encounter **significant challenges** in optimizing space utilization and providing an efficient and user-friendly experience for both drivers and facility operators. Conventional methods, often relying on **manual monitoring or outdated technologies**, fall short in accurately identifying and managing available parking spaces in real-time. This results in **underutilized parking spaces, increased traffic congestion**, and suboptimal resource allocation

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 (switch to sketch) icon to start drawing!

SRIKAL KAKULA

Integrate license plate recognition for personalized parking access. Develop a data analytics dashboard for facility optimization.

Mobile application to find a free spot near by using gps

automated alerts and notifications to alert facility operators to potential issues, such as illegally parked vehicles or maintenance needs, and ensure prompt resolution

A parking allocation app that assigns parking spaces based on visitors' preferred time slots and utilizes an advanced algorithm to efficiently manage the parking spaces based on the duration of parking.

Use machine learning algorithms to forecast peak parking hours and adjust pricing dynamically to encourage off-peak usage, optimizing parking space utilization.

Person 1

Integrate biometric authentication for enhanced parking security and access control.

Implement a feedback loop through the app for reporting inaccuracies in parking availability

AI parking marking the vehicle entry/exit flow

Install a camera-based system at parking lot entrances and exits to monitor parking space occupancy in real-time using OpenCV

Person 2

By studying traffic behaviour to predict future events

Integrate IoT sensors for real-time occupancy and environmental monitoring

reservation system for pre-booking parking spaces, reducing congestion.

Enhance space occupancy detection with smart parking sensors and OpenCV

Person 3

a mini device which move around the parking area to find the free spots with integration with open cv

Access the nearest free parking area using gps and OpenCV video footage to give map to the free spot

Combine a mobile app with the OpenCV system to provide users with real-time information on available parking spaces and make parking easier

keeping a smart video analysis of footage to detect cars

Drones with cameras, AI, and ML algorithms like YOLO are used to find the best parking spot near the car in real-time.

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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.

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

🕒 20 minutes

Access & Optimization

Integrate license plate recognition for personalized parking access.

Implement a reservation system for pre-booking parking spaces to reduce congestion.

Utilize machine learning algorithms to dynamically adjust pricing for optimized space utilization

Advance Tech

Implement biometric authentication to enhance parking security.

space occupancy detection by integrating smart parking sensors with OpenCV

Utilize drones with cameras, AI, and ML algorithms like YOLO for real-time parking spot optimization

Real Time Navigation

Create a mobile application using GPS for finding nearby free parking spots

Combine the mobile app with OpenCV for real-time updates on available parking spaces

GPS and OpenCV video footage to guide users to the nearest free parking area.

Innovation

Use smart video analysis for efficient car detection.

Develop a mini-device integrated with OpenCV to roam and find free parking spots

Monitoring

Install a camera-based system at parking lot entrances and exits for real-time occupancy monitoring with OpenCV

automated alerts and notifications for facility operators regarding issues like illegally parked vehicles or maintenance needs

User Experience

feedback loop through the app for reporting inaccuracies in parking availability.

Implement AI parking marking to streamline vehicle entry/exit flow

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

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 laser pointer holding the **H** key on the keyboard.

