

STEP 1: TEAM GATHERING, COLLABORATION AND SELECT THE PROBLEM STATEMENT

IDEATION PHASE

Brainstorm & Idea Prioritization Template

Date	01 May 2023
Team ID	NM2023TMID11143
Project Name	Intelligent Garbage using deep learning
Maximum Marks	4 marks

BRAINSTORM & IDEA 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://app.mural.co/invitation/mural/idhayaengineeringcollegeforw3467/1682947567139?sender=u7e2d0598d35afb661b879970&key=0798b754>

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.

⌚ 15 minutes to prepare
⌚ 1 hour to collaborate
👤 2-6 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:

⌚ 15 minutes

1. Team gathering

Before you start, please take 15 minutes to read the facilitator's guide. Please also read information on how to work online.

2. Set the goal

To guide the group through the brainstorming session, the facilitator sets goals.

3. Learn how to use the facilitation tools

Use the facilitation. Supervisors to make a happy and productive session.

Open a slide

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

How might we [your problem statement]?

Key rules of brainstorming

To ensure an effective productive session

1 Say it loud

2 Don't judge ideas

3 Build on others

4 Go for volume

5 No criticism, be kind

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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 hit the pencil [switch to sketch] icon to start drawing!

Person 1

Use machine learning algorithms to train a model on various types of garbage images and then, with the system, recognize items, paper waste, food waste, and electronic waste.

Implement computer vision techniques to extract features from garbage images, such as shape, texture, and color.

Use sensors and IoT devices to collect real-time data on the volume of garbage generated, waste, paper waste, metal waste, and so on.

Person 2

Implement sensors on garbage bins that can detect the type of waste being thrown away and sort it automatically.

Develop a mobile application that works with identifying the proper way to dispose of the waste and feed them to nearby recycling facilities.

Provide incentives for citizens who properly categorize their garbage, such as discounts on city services or waste management fees.

Person 3

Introduce educational programs to schools and universities to raise awareness about the importance of garbage classification and the impact the waste has on the environment.

Implement image recognition technology to automatically identify different types of garbage based on their visual characteristics.

Conduct studies on the latest advancements in technology, particularly in data management, privacy, and data. Below is an example of what such studies could include:

Person 4

Concerned about the impact of garbage on the environment. Frustrated with current garbage classification methods.

Satisfaction in taking steps towards environmental sustainability.

Difficulty understanding which items can be recycled or composted.

Lack of consistency in garbage classification guidelines.

Person 5

Search online for information about garbage classification.

Knowledge and understanding of proper garbage disposal methods.

App can be used for classify the material.

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2

Brainstorm

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

10 minutes

TIP

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Person 1

Use machine learning algorithms to train a model on various types of garbage images and then, with the trained model, identify types of waste, paper waste, metal waste, and electronic waste.

Implement computer vision techniques to extract features from garbage images, such as shape, texture, and color.

Use sensors and IoT devices to collect real-time data on the volume of garbage generated, waste, paper waste, metal waste, and so on.

Person 2

Implement sensors on garbage bins that can detect the type of waste being thrown away and sort it automatically.

Develop a mobile application that works with the sensors to identify the proper way to dispose of the waste and send them to nearby recycling facilities.

Provide incentives for citizens who properly categorize their garbage, such as discounts on city services or waste management fees.

Person 3

Introduce educational programs to schools and communities to raise awareness about the importance of proper waste management and the impact the waste has on the environment.

Implement image recognition technology to automatically identify different types of garbage based on their visual characteristics.

Conduct surveys to gather feedback from citizens about the latest advancements in technology, particularly in smart waste management. Below is an example of what such survey could include:

Person 4

Conduct surveys to gather feedback from citizens about the latest advancements in technology, particularly in smart waste management. Below is an example of what such survey could include:

Satisfaction in taking steps towards environmental sustainability

Difficulty understanding which items can be recycled or composted

Lack of consistency in garbage classification guidelines

Person 5

Search online for information about garbage classification

Knowledge and understanding of proper garbage disposal methods

App can be used for classify the material

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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.



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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

Not everyone may use their cursor to point at where sticky notes should go on the grid. The facilitator can assist by using the laser pointer holding the 10 key on the keyboard.

