Ideation Phase
Brainstorm & Idea Prioritization Template

Date	17 September 2022
Team ID	PNT2022TMID00660
Project Name	Machine Learning based Vehicle Performance Analyzer
Maximum Marks	4 Marks

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.

Mural Brain Storming Link:

https://app.mural.co/t/vehicleperformanceanalyzer5784/m/vehicleperformanceanalyzer5784/166523716900
14/a73224941dc1192d26c291fb37a98366a0b229df?sender=ud02961788100c0dda5d08605

Step-1: Team Gathering, Collaboration and Select the Problem Statement

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 predit the performance level of cars The main goal is to predict the performance of the car to improve certain behaviours of the vehicle. This can significantly help to improve the system's fuel consumption and increase efficiency.The performance analysis of the car is based on the engine type, no of engine cylinders, fuel type, horsepower, etc. These are the factors on which the health of the car can be predicted. It is an ongoing process of obtaining, researching, analyzing, and recording health based on the above three factors. The performance objectives like mileage, dependability, flexibility and cost can be grouped together to play a vital role in the prediction engine and engine management system. This approach is a very important step towards understanding the vehicle's performance?

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

Preethi R

Engine Power can be made lower	Speed can be increased	Displacement can be made lower
Wheel base height can be increased	Horse power can be made lower	Turning radius can be made high

Renuka G

Engine Power can be made higher	Engine Torque can be made higher	MSE should be made small
Acceleration can be made minimized	R - Squared should be high	Braking distance should be high

Sivagama Sundari V

Engine torque can be made low	Acceleration can be made high	Fuel consumption can be minimized
Horse Power can be maximized	Departure angle should be made high	Turning radius should be made high

Swati S

Displacement can be made higher	Speed can be decreased	Recent Model year should be new
Fuel consumption can be maximized	Wheel base height can be decreased	Braking distance should be low

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 and break it up into smaller sub-groups.

🕐 20 minutes

Renuka G

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?

- Turning radius can be made high
- Engine Power can be made higher
- R - Squared should be high
- Displacement can be made higher
- Acceleration can be made high
- MSE should be made small
- Horse Power can be maximized
- Engine Torque can be made higher
- Fuel consumption can be minimized
- Speed can be increased
- Braking distance should be high
- Wheel base height can be decreased
- Recent Model year should be new

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.

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