

# Ideation Phase

## Brainstorm&Idea Prioritization Template


Date	19 September 2022
Team ID	PNT2022TMID10940
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.

### 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

➔

**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

A

**Team gathering**

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

B

**Set the goal**

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

C

**Learn how to use the facilitation tools**

Use the Facilitation Superpowers to run a happy and productive session.

Open article ➔

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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

Predicting the performance level of cars is an important and interesting problem. The main goal is to predict the car's performance to improve certain vehicle behaviors. 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 toward understanding the vehicle's performance.



## 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 hit the pencil icon to start drawing!

#### VIGNESWARAN R R

- odometer info has to be taken for evaluation
- prior reports of the vehicle can be taken for evaluation
- Report from last service can taken for evaluation
- Prediction could be increased by feeding large number of information
- Correlation data can be increased to increase the vehicle performance
- Fuel density can be taken for Evaluation

#### YADHEENDRAN K

- The application should be user friendly.
- showing in economy speed range would reduce fuel consumption
- clean air filter helps car get the airflow it needs to run efficiently
- check wheel alignment for better comfort
- Transmission type can be taken for Evaluation
- Quality of each part of the car should be in good condition

#### WASIM AHMED K

- The application should calculate the basic mileage of the vehicle.
- To increase the fuel efficiency, firstly we can check the air pressure of the vehicle tyres.
- The fuel efficiency of the vehicle can be calculated by the weight of it.
- To increase fuel performance and reduce the fuel consumption, we filter should be changed
- Giving more accelerator will increase the fuel consumption.

#### MUTHUKUMARAN S

- The final report generated should be short and precise.
- A copy of the report can be sent to the user if he wishes.
- The application can ask for customer feedback.
- A tutorial on how to use the application can be helpful.
- Application should satisfy all the users expectations.

### 3 Group Ideas

Take turns sharing your ideas while clustering similar or related notes as you go. In the last 10 minutes, 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

Using ML in place of DL, to save processing time.

Innovate with intelligent product and better forecast demand to ensure the exact prediction

Using hypothesis concept, we can easily identify every chunk of the vehicle.

The Program should figure out the car fundamental utility

Information redundancy may be reduced to optimize drivability.

By increasing the radius of disc, we can improve braking performance.

Vehicles with hygienic purifiers obtain enough circulation they require to operate effectively.

Chronograph information needs to be gathered for investigation.

vehicle's earlier reports may be utilized for inspection.

The software can solicit user opinions.

Fixing the air filter may boost performance while also lowering consumption of fuel.

You might use gasoline volume for rating.

The data connection may be eliminated to optimize the performance of the vehicle.

Riding at a medium pace would necessitate less gasoline.

## 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**

**Feasibility**

The final report generated should be short and precise.

The application should be user friendly.

A copy of the report can be sent to the user if he wishes.

Using ML in place of DL, to save processing time.

To increase the fuel efficiency, firstly we can check the air pressure of the vehicle tyres.

The application can be upgraded from customer feedback.

The application should calculate the basic mileage of the vehicle.

A tutorial on how to use the application can be helpful.

Chronograph information needs to be gathered for investigation.

The fuel efficiency of the vehicle can be calculated by the weight of it.