

Project Design Phase-I Proposed Solution Template

Date	3 November, 2022
Project Name	Machine Learning based Vehicle Performance Analyzer
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in proposed solution template.

S.no.	Parameter	Description
1.	Problem Statement (Problem to be solved)	<p>Predicting the performance level of cars is an important and interesting problem. 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.</p> <p>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 on-going process of obtaining, researching, analysing, and recording health based on the above three factors.</p> <p>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.</p>
2.	Idea / Solution description	To train the system with the dataset using a regression model and it will be integrated to the web-based application where the user is notified with the status.
3.	Novelty / Uniqueness	Giving the public and the manufacturer the feature to analyse their vehicle's performance.
4.	Social Impact / Customer Satisfaction	The petrol/diesel cost can become lower due to a better mileage performance and the existing vehicle parts can be reused which increases the reusability thus decreases the cost on new products and the physically abled people have better seat comfort because of accessories work. Better mileage and better engine maintenance provides complete combustion thus emitting less harmful gases.
5.	Business Model (Revenue Model)	The web-based application has a friendly UI for the customer to enter their vehicles detail and the system predicts the value within few seconds.
6.	Scalability of the Solution	The project will be scalable when the parts used to measure data in vehicles is feasible and the ML model is fast in processing data.