Project Design Phase - I

Proposed Solution

Date	22 October 2023
Team ID	SPSGP-600765
Project Name	Car purchase Prediction Using ML
Maximum Marks	4 Marks

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	In today's automotive market, where consumers face a multitude of choices, brands, models, and financing options, the need for an effective car purchase prediction system has never been more crucial. The problem at hand is to develop a machine learning model capable of accurately predicting the optimal car purchase decision for individual buyers. This model must consider a wide array of factors, including the buyer's budget, preferences, and needs, as well as economic factors, market trends, and the ever-evolving landscape of automotive technology

2.	Idea / Solution description	Develop an automated used car price prediction system leveraging Linear Regression. This system will efficiently and accurately predict the price of used cars, reducing the time and effort required for manual price estimation. It will enable effective pricing of used cars, leading to increased sales and profits for car dealerships. The predicted prices can also be used by consumers to get a better understanding of the value of used cars, helping them to make informed purchase decisions.

3.	Novelty / Uniqueness	Using Linear regression, we can reduce the workload and stress on used car dealers, freeing up their time to focus on other important tasks, such as customer service and sales. It can improve the accuracy and efficiency of used car pricing, leading to more informed pricing decisions and increased profits for dealers. It makes it easier for consumers to find and purchase used cars at fair prices, promoting a more transparent and equitable used car market.

4.	Social Impact / Customer Satisfaction	By automating used car price prediction, we can reduce the time and effort spent by car dealers and buyers on pricing used cars, enhancing their efficiency and productivity. Improve the accuracy and fairness of used car pricing, ensuring that both buyers and sellers get a good deal. Increase transparency in the used car market, making it easier for buyers to compare prices and find the best deals. The implementation of advanced technology may create new job opportunities, including roles related to model development and maintenance, data collection and cleaning, quality assurance and testing, sales and marketing, customer support. Increased knowledge about used car price prediction and automation can foster a culture of more informed and responsible car buying and selling.

5.	Business Model (Revenue Model)	The core business revolves around data analysis and modelling, personalized recommendations, algorithm development, integration with Dealers and manufacturers. The revenue streams encompass various aspects, including product sales, services, advertising sales, rental and leasing, franchise fees, affiliate marketing, crowdfunding, and sponsorships. The overarching business strategy places a strong emphasis on sustainability and making a positive social impact.
6.	Scalability of the Solution	Used car price prediction technology is inherently scalable from a technological perspective. It can efficiently accommodate increased data volumes, adapt to evolving market conditions, and integrate with existing and future technologies, ensuring its effectiveness as a scalable solution.