Project Design Phase-I
Proposed Solution Template

Date	19 September 2022
Team ID	PNT2022TMID00778
Project Name	Project – Car Resale Value Prediction
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)	I am a customer. I'm trying to buy a second hand car. But I cannot estimate the price of the car. Because I need a trustworthy platform to predict the price of the car. Which makes me feel Frustrated and Confused.
2.	Idea / Solution description	Deciding whether a used car is worth the posted price when you see listings online can be difficult. Several factors, including mileage, make, model, year, etc. can influence the actual worth of a car. From the perspective of a seller, it is also a dilemma to price a used car appropriately [2-3]. Based on existing data, the aim is to use machine learning algorithms to develop models for predicting used car prices.
3.	Novelty / Uniqueness	As there are so many ongoing experiments that use statistical approaches and some traditional methods to focus on predicting item sales. Most researches have experimented by taking single algorithm to predict sales. In this thesis Machine Learning algorithms such as Simple Linear Regression, Support Vector Regression, Gradient Boos4ng algorithm, and Random Forest Regression are considered for predict the most effective metrics such as accuracy, mean absolute error, and max error are considered for measuring algorithm efficiency. This method will be very beneficial in the future for advanced item sales forecasting.
4.	Social Impact / Customer Satisfaction	Predicting prices of a used car is a challenging task because of a high number of features and parameters that should be considered to generate accurate results. The first and foremost step is data gathering and pre-processing data. Therefore the results generated are highly accurate.so the customer was satisfied.
5.	Business Model (Revenue Model)	Deciding whether a used car is worth the posted price when you see listings online can be difficult. Several factors, including mileage,

		make, model, year, etc. can influence the actual worth of a car. From the perspective of a seller, it is also a dilemma to price a used car. Based on existing data, the aim is to use machine learning algorithms to develop models for predicting used car prices.
6.	Scalability of the Solution	We started with understanding the use case of machine learning in the Automotive industry and how machine learning has transformed the driving experience. Moving on, we looked at the various factors that affect the resale value of a used car and performed exploratory data analysis (EDA). Further, we build a Random Forest Regression model to predict the resale value of a used car. We could have also used simpler regression algorithms like Linear Regression and Lasso Regression. Still, we need to make sure there are no outliers in the dataset before implementing them. Pair plots and scatter plots help visualize the outliers