

Project Design Phase-I

Proposed Solution Template

S No.	Parameter	Description
1	Problem Statement	<p>The main aim of this project is to predict the price of used cars using the various Machine Learning (ML) models.</p> <p>The project should take parameters related to used car as inputs and enable the customers to make decisions by their own</p>
2	Feasibility of Idea	<p>New cars of a particular make, model, and year all have the same retail price, excluding optional features. This price is set by the manufacturer. Used car, however, are subject to supply-and-demand pricing. Further, used cars have additional attributes that factor into the price. These include the condition, milage, and repair history, which sets cars that may have shared a retail price apart.</p>
3	Novelty	<p>Used car price prediction is effectively used to determine the worthiness of the car by their own within few minutes by using various features such as year, model, mileage(km), etc</p>

4	Social Impact/ Customer Satisfaction	<p>If the user wants to buy or sell a own car it helps users to predict the correct valuation by their own.</p> <p>A loss function is to be optimized and mainly a weak learner can make predictions for used cars easily.</p>
5	Business Model(Revenue Model)	<p>It helps users to predict the correct valuation of the car remotely with perfect valuation and without human intervention like car dealers in the process to eliminate biased valuation predicted by the dealer. Using Stored data and dataset provided.</p>
6	Scalability of the Solution	<p>Which of the models and parameters gives the best overall accuracy in making price predictions for used cars. The optimal parameters were determined in the process of implementing the models, and thus each model was implemented with the parameters that yielded the best performance by trial and error.</p> <p>All of the models approximated geometric appreciation, meaning that a constant percentage of value is lost every year independent of the age of the vehicle. Random Forest Regression had a significantly higher assessed average depreciation at approximately 13.8%, compared to the others with 9.7%. This is closer to the range of 15%-31% assessed by Karl Storchmann in his analysis of international depreciation rates</p>