**Project Design Phase-I**

**Proposed Solution Template**

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| Date | 24 September 2022 |
| Team ID | PNT2022TMID00425 |
| Project Name | Project – Car Resale Value Prediction |
| Maximum Marks | 2 Marks |

**Proposed Solution Template:**

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| **S.No.** | **Parameter** | **Description** |
|  | Problem Statement (Problem to be solved) | Accurately predicting the price of used car based on its features, in order to make informed purchases. |
|  | Idea / Solution description | In order to predict the resale value of the car, we proposed an intelligent, flexible, and effective system that is based on using regression algorithms. Considering the main factors which would affect the resale value of a vehicle a regression model is to be built that would give the nearest resale value of the vehicle. We will be using various regression algorithms and algorithm with the best accuracy will be taken as a solution, then it will be integrated to the web-based application where the user is notified with the status of his/her product. |
|  | Novelty / Uniqueness | Using data mining and machine learning approaches, this project proposed a scalable framework for used cars price prediction. An efficient machine learning model is built by training, testing, and evaluating five machine learning regressors named Multi Linear Regression, Random Forest Regression, Decision Tree Regression, K-Nearest Neighbors and Support Vector Machine. The results of our tests were quantified in terms of the R2 score of our predictions. R2 score is a statistical measure of how close the data are to the fitted regression line. |
|  | Social Impact / Customer Satisfaction | People can predict the price of the used cars at a better accuracy and improve the purchases of the user. They can provide their preferred features into consideration with the help of user-friendly interface. |
|  | Business Model (Revenue Model) | It is cost efficient as it is a Software as a Service Platform. People need not spend much money to detect the car resale value. |
|  | Scalability of the Solution | Better execution in accuracy, sensitivity, and specificity as well as in system design flexibility. |