|  |  |
| --- | --- |
| Date | 30th September 2022 |
| Team ID |  |
| Project Name | Car Resale Value Prediction |

**Proposed Solution Document**

|  |  |  |
| --- | --- | --- |
| **S. No** | **Parameter** | **Description** |
|  | Problem Statement | To predict resale values of cars from the given dataset using Machine Learning algorithms |
|  | Solution Description | The dataset has to be pre-processed in an appropriate way prior to Machine Learning model implementation. The stacking algorithm is employed to create an ensemble of strong learners. These learning algorithms can be finalized through experimentation. The model deployment is executed via the Flask platform. |
|  | Novelty | The novelty proposed in this project is the use of an ensemble of Machine Learning models to best predict the price. The ensembling of multiple different Machine Learning models allows us to give a more accurate prediction than when a single model is used. An ensemble reduces the spread or dispersion of the predictions and model performance hence increasing robustness. |
|  | Social Impact | * Gives the customer population a better idea on how the pricing of reused cars is in the market. * Educates people on the multiple factors and attributes that affect the pricing. * Provides a versatile platform with a wide range of browsing options. * Makes car listing simple and effortless * Guarantees smooth access * Along the business perspective it helps people in saving money and time |
|  | Business Model | The product proposed charges a small fee from the customers who want to use this product for predicting car resale prices.  The target customers are the urban people who plan on selling their old cars for the best price possible and get a better car.  The solution here is a one pit-stop service for customers who don’t have to waste their time and energy by providing an accurate price and eliminates the need to ask for multiple referrals from different people.  The costs for this product include the need for updating the current car brand and model prices and an easier way to evaluate a car intended to be sold. |
|  | Scalability of Solution | The solution proposed could be applied to a variety of problem statements involving prediction as a key  problem where the same model/solution could be applied to but the extent to which it is scalable  depends on the attributes and factors pertaining to the different problem statements in their respective  domains. |