

CAR RESALE VALUE PREDICTION

TEAM ID:

PNT2022TMID15627

TEAM MEMBERS:

- | | |
|---------------------|-----------------|
| 1. ARAVINDH R | (927619BEC4010) |
| 2. ARSHATH AHAMED N | (927619BEC4011) |
| 3. ARUN A | (927619BEC4012) |
| 4. DEEPAK KUMAR S | (927619BEC4025) |

INDUSTRY MENTORS NAME:

1. Prof Swetha

FACULTY MENTOR NAME:

Mr. ARUNPRATHAP S

LITERATURE SURVEY

AUTHOR: Praful Rane, Deep Pandya, Dhawal Kotak

DESCRIPTION: Determining whether the listed price of a used car is a challenging task, due to the many factors that drive a used vehicle's price on the market. The focus of this project is developing machine learning models that can accurately predict the price of a used car based on its features, in order to make informed purchases. We implement and evaluate various learning methods on a dataset consisting of the sale prices of different makes and models. We will compare the performance of various machine learning algorithms like Linear Regression, Ridge Regression, Lasso Regression, Elastic Net, Decision Tree Regressor and choose the best out of it. Depending on various parameters we will determine the price of the car. Regression Algorithms are used because they provide us with continuous value as an output and not a categorized value because of which it will be possible to predict the actual price a car rather than the price range of a car.

AUTHOR: K.Samruddhi , Dr. R.Ashok Kumar

DESCRIPTION: Proposed a model to estimate the cost of the used cars using the K nearest neighbour algorithm which is simple and suitable for small data set. Here, we have collected a used cars dataset and analyzed the same. The data was trained by the model and we examined the accuracy of the model among different ratios of trained and test set. The same model is cross-validated for assessing the performance of the model using the K- Fold method which is easy to understand and implement.

AUTHOR: S.E.Viswapriya, Durbaka Sai Sandeep Sharma, Gandavarapu Sathya Kiran

DESCRIPTION: Based on the varying features and factors, and also with the help of experts knowledge the vehicle price prediction has been done accurately. The most necessity ingredient for prediction is brand and model, period usage of vehicle, mileage of vehicle. The fuel type used in the vehicle as well as fuel consumption per mile highly affect price of a vehicle due to a frequent changes in the price of a fuel. Different features like exterior color, door number, type of transmission, dimensions, safety, air condition, interior, whether it has navigation or not will also influence the vehicle price. In this paper, we applied different methods and techniques in order to achieve higher precision of the used vehicle price prediction.

AUTHOR: Gonggie

DESCRIPTION: Proposed a model that is built using ANN (Artificial Neural Networks) for the price prediction of a used car. He considered several attributes: miles passed, estimated car life and brand. The proposed model was built so it could deal with nonlinear relations in data which was not the case with previous models that were utilizing the simple linear regression techniques. The non-linear model was able to predict prices of cars with better precision than other linear models.

AUTHOR: Noor, Jan

DESCRIPTION: Build a model for car price prediction by using multiple linear regression. The dataset was created during the two-months period and included the following features: price, cubic capacity, exterior color, date when the ad was posted, number of ad views, power steering, mileage in kilometer, rims type, type of transmission, engine type, city, registered city, model, version, make and model year. After applying feature selection, the authors considered only engine type, price, model year and model as input features. With the given setup authors were able to achieve prediction accuracy of 98%. In the related work shown above, authors proposed prediction model based on the single machine learning algorithm. However, it is noticeable that single machine learning algorithm approach did not give remarkable prediction results and could be enhanced by assembling various machine learning methods in an ensemble.

AUTHOR: Sameerchand

DESCRIPTION:

They have done the predictions of vehicle price from the historical data that has been collected from daily newspapers. They have used the supervised machine learning techniques for predicting the price of vehicles. Many other algorithms such as multiple linear regression, k- nearest neighbor algorithms ,naïve based, and some decision tree algorithms also been used. All the four algorithms are compared and found the best algorithm for prediction. They have faced some difficulties in comparing the algorithms, somehow they have managed.

AUTHOR: Genesova

DESCRIPTION: Empirically examined the reverse selection in the second hand car market. It has been found that new car dealers (both new and second-hand cars) are different from those who tend to trade second-hand cars in the wholesale market (only from second-hand cars). Reverse-selection models suggest that the vendor type, which sells a higher percentage of trade in the wholesaler market, will, on average, sell higher-quality cars and receive a higher price in return. In order to test this estimation, a survey form of the wholesale behaviors of the dealers and the prices collected in the wholesale auction was used. Poor evidence was found for inverse selection.

AUTHOR: Pazarlioglu and Gunes

DESCRIPTION: Created a hedonic price model suitable for cars in Turkey. First, the hedonic price model theory was discussed, then the empirical analysis results and the most appropriate hedonic model were determined. In the last part of the study, fuzzy hedonic model predictions and normal model estimates were compared to determine the best information fusion informing customers at a high level.

AUTHOR: Matas and Raymond

DESCRIPTION: Built a semi-logarithmic hedonic regression model was used in the period of 1985-2005 in Spain. Fuel efficiency and size have a positive effect on prices .