CAR RESALE VALUE PREDICTION

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ABSTRACT

A primary objective of this project is to estimate used car prices by using attributes that are highly correlated with a label (Price). Due to the unprecedented number of cars being purchased and sold, used car price prediction is a topic of high interest. For a dependable and accurate forecast, a large number of unique attributes are analyzed. This model can benefit sellers, buyers, and car manufacturers in the used cars market. Upon completion, it can output a relatively accurate price prediction based on the information that users input.

LITERATURE SURVEY

NAME : Used Car Price Prediction AI / Machine Learning Project

AUTHOR : Hinal Seth

YEAR : 2021

ABOUT : There are a few major worldwide multinational participants in the automobile sector, as well as several merchants. By trade, international companies are mostly manufacturers, although the retail industry includes both new and used automobile dealers. The used automobile market has seen a huge increase in value, resulting in a bigger percentage of the entire market. In India, about 3.4 million automobiles are sold each year on the secondhand car market.

ALGORITHMS : SVR, Linear Regression, SGD Regressor, K-Neighbors Regressor, Decision Tree Regressor, Random Forest Regressor.

ACCURACY :80.2% ,87.79%

LITERATURE SURVEY

NAME : Predicting True Value of Used Car using Multiple Linear Regression Model

AUTHOR : Laveena D'Costa, Ashoka Wilson D'Souza, Abhijith K, Deepthi Maria Varghese

YEAR : 2020

ABOUT : Predicting the true value of used cars requires lot of analysis. This prediction takes into account variables such as car model, fuel type, number of owner and so on. In this paper we are applying machine learning algorithms to determine the true value of cars when selling them to the dealers. We have used multiple linear regression model by dividing the data into training and test. Vehicle price forecast is both a critical and significant job, particularly when the car is used and does not come directly from the factory.

ALGORITHM : Multiple linear regression

ACCURACY : 89.30%

LITERATURE SURVEY

NAME : How much is my car worth? A methodology for predicting used cars prices using Random Forest

AUTHOR : Nabarun Pa, Priya Arora, Dhanasekar Sundararaman, Puneet Kohli, Sai Sumanth Palakurthy.

YEAR : 2018

ABOUT : The rise of used cars sales is exponentially increasing. Car sellers sometimes take advantage of this scenario by listing unrealistic prices owing to the demand. Therefore, arises a need for a model that can assign a price for a vehicle by evaluating its features taking the prices of other cars into consideration. In this paper, we use supervised learning method namely Random Forest to predict the prices of used cars. The model has been chosen after careful exploratory data analysis to determine the impact of each feature on price. A Random Forest with 500 Decision Trees were created to train the data. From experimental results, the training accuracy was found out to be 95.82%, and the testing accuracy was 83.63%. The model can predict the price of cars accurately by choosing the most correlated features.

ALGORITHM : Random Forest

ACCURACY : 83.62%

LITERATURE SURVEY

NAME : Car Price Prediction using Machine Learning

AUTHOR : T Veda Reddy, Y. Praneeth, Y. Sai Kiran, G. Sai Pavan

YEAR : 2022

ABOUT : Due to the increased prices of new cars and the financial incapability of the customers to buy them, used Car sales are on a global increase. Therefore, to find the car price which would be best suited for the buyer in India, we are going to predict its cost with the help of Machine Learning algorithms [1] which are made available by the Python Environment such as the Gradient Boosting algorithm. Our dataset comprises data related to different car brands with a set of parameters (Name, Location, Year, Fuel Type, Transmission, Owner Type, Mileage, Engine, Power, Seats, Price). The primary purpose is to design a model for a given dataset and predict the car price with better accuracy.

ALGORITHM : K-nearest neighbor (KNN)

ACCURACY : 93%

LITERATURE SURVEY

NAME : Used Car Price Prediction using K-Nearest Neighbor Based Model

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

YEAR : 2020

ABOUT : Predicting the price of used cars is one of the significant and interesting areas of analysis. As an increased demand in the second-hand car market, the business for both buyers and sellers has increased. For reliable and accurate prediction it requires expert knowledge about the field because of the price of the cars dependent on many important factors. This paper proposed a supervised machine learning model using KNN (K Nearest Neighbor) regression algorithm to analyze the price of used cars. We trained our model with data of used cars which is collected from the Kaggle website. Through this experiment, the data was examined with different trained and test ratios. As a result, the accuracy of the proposed model is around 85% and is fitted as the optimized model.

ALGORITHM : KNN, Linear regression.

ACCURACY : 85%, 71%