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Literature Survey

CAR RESALE VALUE PREDICTION

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1. Car Price Prediction using Machine Learning Techniques Authors: Enis gegic.

A car price prediction has been a high interest research area, as it requires noticeable effort and knowledge of the field expert. Considerable number of distinct attributes are examined for the reliable and accurate prediction. To build a model for predicting the price of used cars in Bosnia and Herzegovina, we applied three machine learning techniques (Artificial Neural Network, Support Vector Machine and Random Forest). However, the mentioned techniques were applied to work as an ensemble. The data used for the prediction was collected from the web portal autopijaca.ba using web scraper that was written in PHP programming language. Respective performances of different algorithms were then compared to find one that best suits the available data set. The final prediction model 2 was integrated into Java application. Furthermore, the model was evaluated using test data and the accuracy of 87.38% was obtained.

2. Price Evaluation Model In Second Hand Car System Based On BP Neural Network Theory Authors: Ning sun.

With the rapid growth of the number of private cars and the development of the second-hand car market, second-hand cars have become the main choice when people buy cars. The online second-hand car platform provides both buyers and sellers the chance of online P2P trade. In such systems, the accuracy of second-hand car price evaluation largely determines whether the seller and the buyer can get more efficient trading experience.

3. **Prediction of Car Price using Linear Regression Authors: A. Rengarajan .**

In this paper, we look at how supervised machine learning techniques can be used to forecast car prices in India. Data from the online marketplace quikr was used to make the predictions. The predictions were made using a variety of methods, including multiple linear regression analysis, Random forest regressor and Randomized search CV. The predictions are then analyzed and compared to determine which ones provide the best results.

4. **Vehicle Price Prediction System using Machine Learning Techniques Authors: Kanwal Noor.**

In this paper, they proposed a model to predict the price of the cars through multiple linear regression method. Here system were able to achieve high level of accuracy using Multiple linear regression models to predict the price of cars collected from used cars website in Pakistan called Pak Wheels that totalled to 1699 records after pre-processing, and where 3 able to achieve accuracy of 98%, this was done after reducing the total amount of attributes using variable selection technique to include significant attributes only and to reduce the complexity of the model.

5. **Predicting the Price of Second-hand Cars using Artificial Neural Networks Authors: Saamiyah Peerun.**

The aim of this study is to assess whether it is possible to predict the price of secondhand cars using artificial neural networks. Thus, data for 200 cars from different sources was gathered and fed to four different machine learning algorithms. We found that support vector machine regression produced slightly better results than using a neural network or linear regression. However, some of the predicted values are quite far away from the actual prices, especially for higher priced cars.

6. **Used Car Price Prediction using K-Nearest Neighbor Based Model Authors: K.Samruddhi.**

In this paper, a machine learning model is proposed to estimate the cost of the used cars using the K-Nearest Neighbor algorithm. The model is trained with used cars

7 data for different trained and test ratios. Then the proposed model is crossvalidated using K fold method to examine the performance to avoid the over fit.

7. **Prediction of Prices for Used Car by Using Regression Models Authors: Nitis Monburinon.**

In this paper, the authors selected the data from the German ecommerce site. The main goal of this work is to find a suitable predictive model to predict the used cars price. They used different machine learning techniques for comparison and used the mean absolute error(MAE) as the metric. They proposed that their model with gradient boosted regression has a lower error with MAE value 0.28 and this gives the higher performance where linear regression has the MAE value 0.55, random forest with MAE value 0.35.

8. **Used car price prediction using SVM Authors: Gegic..**

In this paper, using data scrapped from a local Bosnian website for used cars totalled at 797 car samples after pre-processing, and proposed using these methods: Support Vector Machine, Random Forest and Artificial Neural network. Results have shown using only one machine learning algorithm achieved results less than 50%, whereas after combing the algorithms with pre calcification of prices using Random Forest, results with accuracies up to 87.38% was recorded.