CAR RESALE VALUE PREDICTION

INTRODUCTION:

Predicting the price of used cars is both an important and interesting problem. According to data obtained from the National Transport Authority the number of cars registered in recent years has witnessed a spectacular increase. With difficult economic conditions, it is likely that sales of second-hand imported (reconditioned) cars and used cars will increase. It is reported that the sales of new cars have registered a decrease in 2020 & 2021 due to pandemic conditions. In many developed countries.

It is common to lease a car rather than buying it outright. A lease is a binding contract between buyer and a seller (or a third party – usually a bank, insurance firm or other fina institutions) in which the buyer must pay fixed installments for a predefined number of months/years to the seller. After the lease period is over, the buyer has the possibility to buy the car at its residual value, i.e., its expected resale value. Thus, it is of commercial interest to sellers to be able to predict the salvage value (residual value) of cars with accuracy. If the residual value is underestimated by the seller at the beginning, the installments will be higher for the clients who will certainly then opt for another seller .

If the residual value is overestimated, the installments will be lower for the clients but then the seller may have much difficulty at selling these high-priced used cars at this over-estimated residual value. Thus, we can see that estimating the price of used cars is of very high commercial importance as well.

Literature survey:

Paper1- Car Price Prediction Using Machine Learning Techniques

In the first existing survey

'CarPrice Prediction Using Machine Learning Techconridqiunegst'o author Enis Gegic, Becir Isakovic, Dino Keco, Zerina Masetic, Jasmin Kevric, in this paper they mainly concentrate on collecting various data from web portals by using web scrap techniques and those have been compared with the help of different machine learning algorithms to predict the vehicle price in an easy manner. They classified the price according to different ranges of price that is already given.

Artificial neural network support vector machine, random forest algorithms were used on different datasets to build classifiers model. In the existing system, to predict the price of vehicle wheelers and four wheelers, a lot of data mining algorithms and machine learning algorithms were widely used. The major drawback of this existing system is they need more attributes in order to predict the vehicle price.

More comparison techniques must be used to get the result more efficiently. It is highly complicated to get sufficient data sets that were spread widely all over the world. The datasets can be collected on through online. But not on the offline mode. It is not possible for everyone to collect the data sets through online mode particularly in rural areas. The data sets will not about the vehicles which were not used for long time and also the traditional mod vehicles may or may not be included in the data sets.

Paper 2 - Predicting the Price of Used Cars Using Machine Lea Techniques

In the second existing survey Ref

'Predicting the Price of Used Cars UsingMachineLearningTechniques'according to author Sameerchand Pudaruth they have done the predictions of car price from the historical data that has been collected from daily newspapers. For predicting the price of vehicles, they 4 have used supervised machine learning techniques. Other algorithms were also used to

predict such as multiple linear regression, some decision tree algorithms. All these algorithms were compared and found the best algorithm for prediction. They have faced some difficulties in comparing the algorithms, somehow they have managed. The major drawbacks of existing system are the system is ve slow due to most of the works about the keyword query just analyze individual points and they are inappropriate to many applications that call for analysis of groups of different vehicle points.

In the existing system 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. In future, gaining advancement in this system model we could rely on this to predict the value. Generally, e-commerce platforms attract customers in different ways to use their system for buying or selling and the algorithm which is used in their system is such that the value is not accurate. It is overpriced when a customer wants to buy a car and vice versa while selling.

Also referring to the tremendous loss reported of worth more than a billion dollars in Germany due to mis-calculation of the car value which could be overcome using this prediction application. Further, we may add large historical data of car price which can help to improve accuracy of the machine learning model. We can build an android app for better user interaction and for better performance

We plan to judiciously design deep learning network structures, use adaptive learning rates and train on clusters of data rather than the whole dataset.Two wheelers and four wheelers, a lot of data mining algorithms and machine learning algorithms were widely used. The major drawback of this existing system is they need more attributes in order to predict the vehicle price. More comparison techniques must be used to get the result more efficiently. It is highly complicated to get sufficient data sets that were spread widely all over the world.

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