

CAR Prediction

Submitted by:

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**ACKNOWLEDGMENT**

Reference by Data trained used cases and also with git hub data set for model building.

**INTRODUCTION**

* Business Problem Framing

Buying a car is a big buzz nowadays maybe brand new cars or used cars… to choose the best is the big thing nowadays.

Businesses have run with data to get the accurate price and best cars to buy.

* Conceptual Background of the Domain Problem

Whenever we have the data set should always analyze with domain problems that can help the customer/clients for who we build the model in the way that the prediction can help the business to help the customer needs.

* Review of Literature

The data set which is used for machine learning is from the last 10 yrs because to get to know how the car price from years to till current date to understand how the changes happened in course of time, this would help us to know the current period of demand in the market and understand customer needs how we can predict the price based on the data.

* Motivation for the Problem Undertaken

This model will help the business to get the exact price based on the data which we collected.

**Analytical Problem Framing**

* Mathematical/ Analytical Modeling of the Problem

The data set had some categorical data and it had a huge number of columns and Rows, also when analyzing the data set it was easy to achieve the target.

* Data Sources and their formats

The origin data set was in. CSV file.

* Data Preprocessing Done

In data preprocessing we converted the categorical data so that when we train the model we get the better results

* Data Inputs- Logic- Output Relationships

Describe the relationship behind the data input, its format, the logic in between, and the output. Describe how the input affects the output.

* Hardware and Software Requirements and Tools Used

Python – libraries [Pandas, Matplotlib, Seaborn, Linear Regression, Lasso & Metrics].

**Model/s Development and Evaluation**

* Identification of possible problem-solving approaches (methods)

First is data cleaning to check how many rows and columns we have in data to analyze so that we will get an idea of which is our target based on that we can process the data and then move into test and train.

* Testing of Identified Approaches (Algorithms)

For this project, the best two are Linear Regression and Lasso.

* Run and Evaluate selected models

Linear and Lasso were the best ones for the data set that we used but compare to Linear, Lasso was the best in this case.

* Key Metrics for success in solving the problems under consideration

With R squared result was compared to both Linear and Lasso but Lasso was doing best in test and training.

* Visualizations

A Scatter plot is used to view the best line graph between actual and predicted prices of cars.

* Interpretation of the Results

The entire process was a bit easy with using different libraries and algorithms to get the best model.