**Problem Statement**

This dataset contains information about used cars. I will be trying to predict selling prices of used cars using the dataset from Car Dekho (Car buying and selling site). Company to understand the factors on which the pricing of cars depends . Specifically they want to understand the factors affecting the price of cars.

**The columns in the given dataset are as follows**

1.name

2.year

3.selling price

4.km driven

5.fuel

6.seller type

7.transmission

8.owner

**Bussiness Goal**

You are required to model the price of cars with the available independent variables. It willbe used by the management to understand how exactly the prices vary with the independent variables. They can accordingly manipulate the design of the cars, the business strategy etc. to meet certain price levels. Further, the model will be a good way for management to understand the pricing dynamics of a new market.

**What we are going to do in this data**

1. Import libraries ,
2. Reading the file
3. See data shape and types
4. Handling Missing Value
5. Data Analysis
6. Data Visualization
7. Handling Outliers
8. Feature engineering- Encoding Technique
9. Machine Learning Algorithm-

**STEP 1**

**Step 1**  First I upload all libraries like numpy ,pandas matplotlib, seabron

**Step 2** upload data in csv file

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**step3** There are 4340 raws and 8 columns. There is no null value .

**Step4** See colrelation and represent by graph and see statical analysis

describe function in python summarizes statistics. This Function returns

the count mean standard deviation minimum and Maximum value the quantiles

of the data.

**EDA AND Visualization**

**TASK 1 How many types of fuel present in this data and find what kind of maximum and minimum fuel ?**

**SOL -** 1. Petrol 2.diesel 3.CNG 4. LPG 5.Electic.

**TASK 2 See Fuel type on basis of owner?**

Sol 1.First 2. second 3.third 4.fourth 5. test drive car

**TASK 2 Now we saw fuel type on basis of transmission** ?

Sol There are two types of transmission automatic and manual . count of Manual and automatic are same in petrol and diesel but count of CNG and LPG is amximun in manual

**TASK 3 Now I saw fuel type on the basis of seller type?**

Sol There are three types of seller present in this data individual dealer and trstmark dealer. All three types of seller is equal in petrol and diesel but count of individual seller is max in CNG and LPG.

**TASK 4 Find the count of seller type present in this data** >

Sol There are three seller type individual dealer and trust mark dealer . Individual seller is maximum and Trustmark sealor is minimum.

**TAKS 5 How many types of owner and find which is max and min?**

Sol There are five type of owner first second third fourth and test drive. Count of first owner is maximun and test drive is min .

**TASK 5 Owner count on the basis of year?**

Sol count of first owner is maximum in 2017 count of first owner is approx. 450+ . max count of second owner in 2012 . max count of third owner in 2009, 2010,2010 is almost equal test drive car is maximun in 2020.

**TASK 6 Seller count on the basis of year?**

Sol There are three types of seller individual dealer and trust marks dealer . individual seller who sale max number of car in 2012. Dealer who sale max car in 2017 .Trust make seller who sale max car in 2015.

**TASK 7 Fuel count on the basis of year?**

Sol Diesel cars sales is maximun in 2013 and 2012 . but in 2013 petrol cars sales is maximun compare to deasel and also petrol cars sales ix maximum in 2017.

**TASK 8 count of transmission on the basis of year?**

Sol Manual cars sale is mximun in 2015 and 2012 approx same .

Automatic cars sales is maximun in 2017.

**TASK 9 See selling price on the bases of fuel?**

Sol Total maximun price of deasel that mean most care sale is in deasel

**TASK 10. Find total distance coverd cars on the bases of fuel?**

Sol due to low price of LPG cars covered by maximum distance and due to very high price of petrol cars covered by min distance.

**TASK 11 Find total distance on the bases of transmission ?**

Sol Due to max number of manual cars covered by maximum distance compare to automatic

**TASK 12 Find price on the bases of transmission ?**

Sol automatically casrs price is very costly compare to manual

**TASK 13 Handling Outliers**

**TASK 14 After handling Outliers I see how perfome my data and outlier represent by graph**

**TASK 15 Feature Engineering -🡪 Encoding Techniques**

Sol use label and ordinal encoding because my data is suitable for this type of encoding

**TASK 16 Scaling -🡪 use standard scaler**

Sol I used for thall the value will be same scale

**TASK 17 Data Divided in train test split.**

TASK 18 I did train my data with LINER REGRESSION and see how my model perfume . My model gives score 65%

**CONCLUSION**

We tried predicting the car price using the various parameters that were provided in

the data about the car. We build machine learning models to predict car prices .I

have found that the **Linear Regression** feature sets performed better than others. It

gave the **score of 65%.**It will be used by the management to understand how exactly the

prices vary with the independent variables. They can accordingly manipulate the

Design of the cars to meet certain price levels.

### WHAT IS DATA STRUCTURE?

### A data structure is a particular way of storing and organizing data in our devices to use the data efficiently and effectively

### What is algorithm?

### Algorithn means a process or set of well defined instructions that are typically used to solve a particular group of peoblems or perfume a specific type of calculation

### How to master data structure and algorithm

### STEP 1 Learn at least one programming language

### STEP 2 Learn about complexities

### A\_) Time Complexity

### B) Space Complexity

### STEP 3 Learn Data structures and algorithms

### 1.Array

### 2.String

### 3.Linked list

### 4.Searching Algorithm

### 5. Storing Algorithm

### 6.Divide the Conquer Algorithm

### 7.Stack

### 8.Queue

### 9.Tree Data Structure

### 10.Graph Data Structure

### 11.Greedy Mehtodology

### 12.Recursion

### 13.Backtracking Algorithm

### 14.Dynamic Programming

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