NOVANECTAR SERVICES PVT. LTD.

Data Analytics

Project Title -Car_Price Analysis (In Python)

Project Briefing: **Deadline: 28/02/2025**

Download Data Link:
https://drive.google.com/file/d/1XFlRtgnRKU1W3kWxyLfVKOQkoCJgYooM/view?usp=sharing

Import the libraries
Inspecting the data frame.
Data Cleaning
1. Checking the null count for different columns with null percentage.
2. Removing columns with high null percentage value if any.
3. Check and remove if any Rows with high "Na" values.
4. Drop the unwanted Columns
5. Sort the table equivalently if needed

Data Visualization
- We will see the different relationship between the quantitative variables. Using the Pairplot and heatmap.
- Target or the dependent variable - Price

Data Preparation
Following changes has been done as a part of data preparation.
- CarName column has been split as per the instruction into carCompany.
- Few data spelling issue found with name of the car company; it has been replaced with one consistent name.
- Dropping car_ID column since it is just serial no.
- Converting the categorical variable into quantitative values. Using dummy variables for level more than 2.

- Renaming all the new columns created using dummy variable so that it is easy to interpret the features.
- New derived column car stability is defined above car_stability = wheelbase/length_of_car.
- Dropping related independent variables.
- Highly co-related variables, we can get it from heatmap

Features direct co-relation value

- carlength-wheelbase 0.88
- carwidth-wheelbase 0.8
- curbweight-wheelbase 0.79
- highwaympg-citympg 0.97
- Now if you see these independent variables they have high co-relation. So from carlength,carwidth,curbweight,wheelbase we will drop 3 columns and keep only 1. Similarly, we will keep only citympg and drop highwaympg. Since car_stability also has high co-relation, it is also dropped as to remove redundancy.

Data Analysis

·Analysis using Histogram, BarCharts

·Describe the HeatMap and gradient representation of the graphs

·Generate Insights and then create a report on the outcome of the analysis

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