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Regression Project 1

Car Price Prediction

Suppose you are a data scientist working on a project for an insurance company that is trying to understand how the characteristics of a car could impact its price.

To perform the task, you received a dataset containing 205 observations representing cars with 26 variables defining its characteristics.

You also received a description of the dataset including the definition of each variable.

Your manager asked you to build a model that implements machine learning linear regression on the received data. To get the work done, he asked you to:

1. Read the dataset and perform an Exploratory Data Analysis

- Read the file
- Check the column names and first rows
- Check for missing values
- Check the datatypes

Car Price Prediction

2. Read the dataset again, specifying that the dataset doesn't have a header row, indicating the column names and the correct interpretation of missing data

- Read the file
- Check the column names and first rows
- Check for missing values
- Check the datatypes
- Analyze the categorical data

3. Remove unused columns

4. Deal with missing data

- num_of_doors column
- bore column
- stroke column
- horsepower column
- peak_rpm column
- price column

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5. Deal with categorical columns

- num_of_cylinders column
- Other categorical columns

6. Split your data into train (80%) and test (20%) data, and separe the dependent variables of the independent variables

- Split the original data into train and test datasets
- Separate your dependent variable of the training data
- Separate your dependent variable of the test data

7. Train and execute your model

- Create the linear regression object
- Train the model using the training sets
- Make predictions using the testing set

8. Assess the performance of your model

- Print the R-Squared of your model
- print the comparison between the prediction of the model and the actual dat


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THANK YOU
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