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Steps of MLR

Step 1: Upload and load dataset in data frame “df”.

Step 2: Search for missing values and treat them

Step 3: Search for duplicate values and treat them

Step 4: Draw BoxPlot and identify outliers and treat them using IQR

Step 5: Remove “Company\_ID”, “Year”, and “Company\_Name” columns

Step 6: Perform Scaling of the data “StandardScaler”

Step 7: Use One-Hot Encoding to encode “Industry” and “Credit\_Rating”

Step 8: Generate Histogram of all columns to verify if data is normally distributed (Univariate)

Step 9: Generate graph to check trend between each column vs Credit\_Rating (Bivariate)

Step 10: Draw Heatmap to check multi-collinearity (Multivariate)

Step 11: Split “x” as independent variables and “y” as dependent variable.

Step 12: Divide the data in train and test in the ratio 80:20 respectively

Step 13: Perform MLR on x and y

Step 14: Extract VIF for all columns

Step 15: Drop columns with highest p-value and perform MLR again until only columns with significant p-value remain.

Step 16: Test normality of errors using histogram with smooth line

Step 17: Plot residuals vs predicted values

Step 18: Test the homoscedasticity using white test