1. Load a dataset, display the first five rows, summarize its statistics, and visualize missing values using a heatmap.

2. Handle missing values, encode categorical variables, and compare the distribution of a numerical column before and after scaling using a histogram.

3. Compute covariance and correlation matrices, visualize correlations using a heatmap, and identify the top three most positively and negatively correlated features.

4. Split the dataset into an 80-20 train-test ratio and visualize the target variable distribution using a boxplot.

5. Train a Linear Regression model, visualize the regression line, and evaluate it using RMSE, MSE, and R² score.

6. Train a Linear Regression model, plot the confusion matrix using Seaborn, and evaluate it using Precision, Recall, F1-score, and the ROC curve.

7. Implement Ridge and Lasso Regression, compare coefficient values, analyze the effect of regularization using bar plots, and tune the hyperparameter alpha to visualize RMSE changes.

8. Train a Random Forest model, extract the top 10 most important features, and visualize them using a bar chart.

9. Detect outliers using the IQR method, visualize them with a boxplot, remove them, and compare model performance before and after.