# Machine Learning Assignment:

# Multi-Dataset Regression Analysis and Prediction

- Load the following in-built datasets from sklearn.datasets:

    - load_boston – House prices dataset.

    - load_diabetes – Diabetes progression dataset.

    - fetch_california_housing – California housing dataset.

- Display the dataset description and show the first 5 rows of the data.

- Handle missing values (if any) and ensure the data is clean for model training.

- Select appropriate features (X) and the target variable (y)

- Implement three types of regression models:

    - Linear Regression (LR).

    - Multiple Linear Regression (MLR).

    - Polynomial Regression (PLR) with degree 2 or 3.

- Develop a Streamlit application with the following features:

  - Allow users to select the dataset (boston, diabetes, or california_housing).

  - Provide an option to choose the regression model (LR, MLR, or PLR).

  - Display dataset details and feature information.

  - Allow users to input feature values dynamically.

  - Predict the output and display the results.

- Visualize the results using Matplotlib:

  - Plot actual vs. predicted values as a scatter plot.

  - Display the regression line for LR and PLR.

- Export the actual vs. predicted results to a CSV file.