USER MANUAL

OVERVIEW

This tool performs machine learning experiments on performance datasets, comparing a baseline Linear Regression model with an improved XGBoost model. It processes multiple datasets, evaluates model performance, and saves results in a CSV file.

Usage Instructions

1. Prepare the Dataset
    - Ensure that your datasets are structured as CSV files with numerical and categorical features.
    - Store datasets in the appropriate directory: C:\Users\chiam\OneDrive\Desktop\ISE\lab2\datasets.
2. Run the Script
    - Execute the Python script:
3. python Configuration_Performance_Learning.py
    - The script will automatically iterate through datasets, train models, evaluate performance, and save results to model_performance_results.csv.
4. Output
    - The output file model_performance_results1.csv contains performance metrics for each dataset and model iteration.
    - Metrics included:
        - MAE (Mean Absolute Error)
        - MAPE (Mean Absolute Percentage Error)
        - RMSE (Root Mean Squared Error)
        - Statistical significance tests (p-value)