1. The Student Performance dataset from UCI contains student grades influenced by demographic, academic, and social attributes.

    (a) Load and preprocess the dataset using Python.
    (b) Develop a Linear Regression model to predict the final exam score (G3).
    (c) Identify the control parameters (hyperparameters) of the regression model.
    (d) Design controlled experiments by systematically varying the parameters.

2. The Breast Cancer Wisconsin dataset from UCI contains cell nucleus features computed from digitized images of fine needle aspirates of breast masses.

    (a) Load and preprocess the dataset using Python.
    (b) Develop a Logistic Regression model to classify tumors as malignant or benign.
    (c) Identify the control parameters (hyperparameters) of the Logistic Regression model.
    (d) Design and conduct controlled experiments by systematically varying the hyperparameters.

3. For the bank marketing dataset from UCI, Perform the following tasks,
    a) Implement a Random Forest classifier to illustrate Bagging.
    b) Implement an AdaBoost classifier to illustrate Boosting.
    c) Conduct controlled experiments by varying the following hyperparameters: n_estimators, max_depth (for tree-based models), learning_rate (for AdaBoost)
    d) Compare the performance of all models and analyze:
        a. How Random Forest reduces variance.
        b. How AdaBoost reduces bias.