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In [3]: ## How to plot Validation Curve in Python
def Snippet_141():
    print()
    print(format('How to plot Validation Curve in Python', '^82'))

    import warnings
    warnings.filterwarnings("ignore")

    # load libraries
    import matplotlib.pyplot as plt
    import numpy as np
    from sklearn.datasets import load_digits
    from sklearn.ensemble import RandomForestClassifier
    from sklearn.model_selection import validation_curve

    # Load data
    digits = load_digits()

    # Create feature matrix and target vector
    X, y = digits.data, digits.target

    # Plot Validation Curve
    # Create range of values for parameter
    param_range = np.arange(1, 250, 2)

    # Calculate accuracy on training and test set using range of parameter values
    train_scores, test_scores = validation_curve(RandomForestClassifier(),
                                                X, y, param_name="n_estimators", param_range=param_range,
                                                cv=4, scoring="accuracy", n_jobs=-1)

    # Calculate mean and standard deviation for training set scores
    train_mean = np.mean(train_scores, axis=1)
    train_std = np.std(train_scores, axis=1)

    # Calculate mean and standard deviation for test set scores
    test_mean = np.mean(test_scores, axis=1)
    test_std = np.std(test_scores, axis=1)

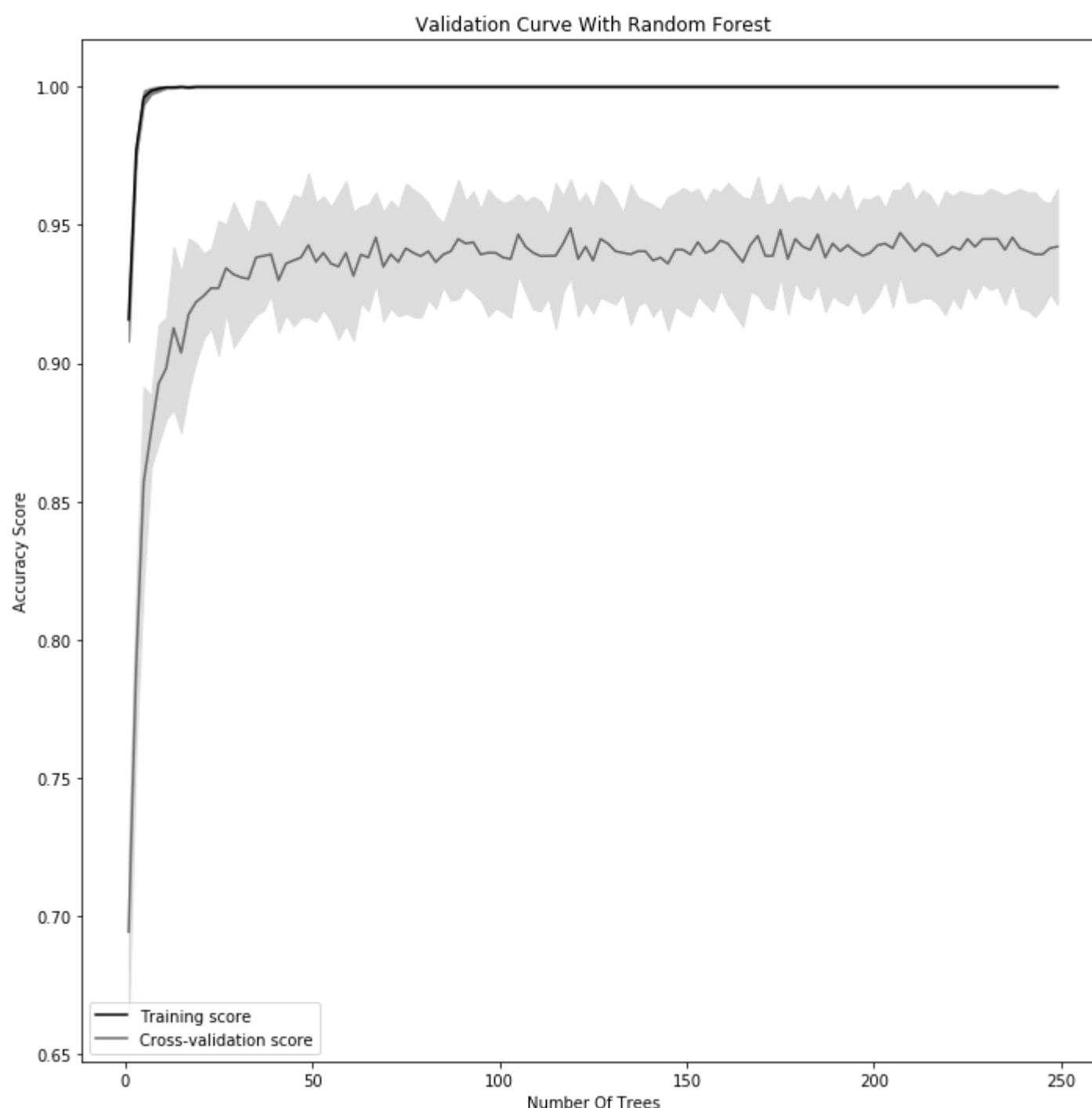
    # Plot mean accuracy scores for training and test sets
    plt.subplots(1, figsize=(10,10))
    plt.plot(param_range, train_mean, label="Training score", color="black")
    plt.plot(param_range, test_mean, label="Cross-validation score", color="dimgrey")

    # Plot accuracy bands for training and test sets
    plt.fill_between(param_range, train_mean - train_std, train_mean + train_std, color="gray")
    plt.fill_between(param_range, test_mean - test_std, test_mean + test_std, color="gainsboro")

    # Create plot
    plt.title("Validation Curve With Random Forest")
    plt.xlabel("Number Of Trees")
    plt.ylabel("Accuracy Score")
    plt.tight_layout()
    plt.legend(loc="best")
    plt.show()
Snippet_141()


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\*\*\*\*\*How to plot Validation Curve in Python\*\*\*\*\*



In [ ]: