

```

In [3]: ## How to plot a learning Curve in Python
def Snippet_139():
    print()
    print(format('How to plot a learning Curve in Python', '^82'))

    import warnings
    warnings.filterwarnings("ignore")

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

    # Load data
    digits = load_digits()

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

    # Plot Learning Curve
    # Create CV training and test scores for various training set sizes
    train_sizes, train_scores, test_scores = learning_curve(RandomForestClassifier(),
                                                            X, y, cv=10, scoring='accuracy', n_jobs=-1,
                                                            # 50 different sizes of the training set
                                                            train_sizes=np.linspace(0.01, 1.0, 50))

    # Create means and standard deviations of training set scores
    train_mean = np.mean(train_scores, axis=1)
    train_std = np.std(train_scores, axis=1)

    # Create means and standard deviations of test set scores
    test_mean = np.mean(test_scores, axis=1)
    test_std = np.std(test_scores, axis=1)

    # Draw lines
    plt.subplots(1, figsize=(10,10))
    plt.plot(train_sizes, train_mean, '--', color="#111111", label="Training score")
    plt.plot(train_sizes, test_mean, color="#111111", label="Cross-validation score")

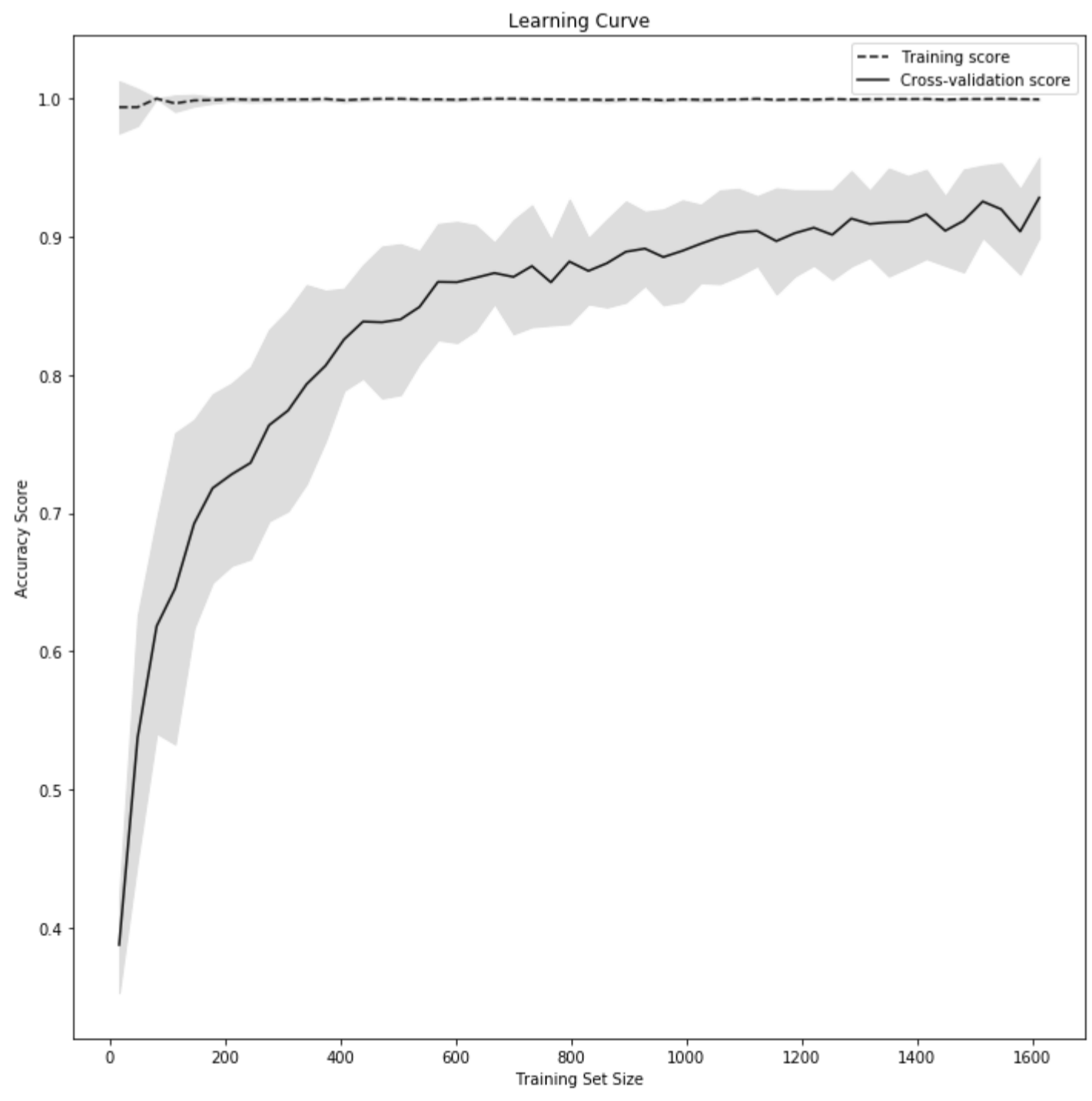
    # Draw bands
    plt.fill_between(train_sizes, train_mean - train_std, train_mean + train_std, color="#DDDDDD")
    plt.fill_between(train_sizes, test_mean - test_std, test_mean + test_std, color="#DDDDDD")

    # Create plot
    plt.title("Learning Curve")
    plt.xlabel("Training Set Size"), plt.ylabel("Accuracy Score"), plt.legend(loc="best")
    plt.tight_layout(); plt.show()

Snippet_139()

```

*****How to plot a learning Curve in Python*****



In []: