Python AI Project: House Price Prediction (Cheat Sheet)

1. import pandas as pd

   - Import Pandas for working with data tables.

2. import matplotlib.pyplot as plt

   - Import Matplotlib for graphing and plots.

3. from sklearn.model_selection import train_test_split

   - Tool to split data into training and testing sets.

4. from sklearn.linear_model import LinearRegression

   - Import linear regression model from sklearn.

5. df = pd.read_csv('kc_house_data.csv')

   - Load your CSV dataset into a DataFrame.

6. X = df[['sqft_living']]

   - Choose your input feature (square footage).

7. y = df['price']

   - Choose your target label (price).

8. X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2)

   - Split data into 80% training, 20% testing.

9. model = LinearRegression()

   - Create a linear regression model.

10. model.fit(X_train, y_train)

   - Train the model using the training data.

11. predictions = model.predict(X_test)

   - Predict prices using the test data.

12. plt.scatter(X_test, y_test)

   - Plot actual test values as blue dots.

13. plt.plot(X_test, predictions)

   - Plot predicted values as a red line.

14. plt.xlabel('Living Area (sqft)')

15. plt.ylabel('Price')

16. plt.title('House Price Prediction')

17. plt.legend()

18. plt.show()

- Display the final chart with labels and legend.