

```
import pandas as pd

from sklearn.model_selection import train_test_split
from sklearn.linear_model import LinearRegression
from sklearn.metrics import mean_squared_error, r2_score


import matplotlib.pyplot as plt


# Load the Boston Housing Dataset
# make sure to load the dataset if using collab
boston_data = pd.read_csv("train_for_prac4.csv")


# Explore the dataset
print(boston_data.head())


# Separate features (X) and target variable (y)
X = boston_data.drop(['ID', 'indus'], axis=1)
y = boston_data['indus']


# Split the data into training and testing sets
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_state=42)


# Create a Linear Regression model
model = LinearRegression()


# Train the model
model.fit(X_train, y_train)


# Make predictions on the test set
y_pred = model.predict(X_test)
print(y_pred)
```

```
mse = mean_squared_error(y_test, y_pred)
```

```
r2 = r2_score(y_test, y_pred)
```

```
print(f'Mean Squared Error: {mse}')
```

```
print(f'R-squared: {r2}')
```

```
# Plotting predicted vs actual prices
```

```
plt.scatter(y_test, y_pred)
```

```
plt.xlabel('Actual Prices')
```

```
plt.ylabel('Predicted Prices')
```

```
plt.title('Actual Prices vs Predicted Prices')
```

```
plt.show()
```