



Launcher



House_Sales_in_King_Count_



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Pyolite



Support/Feedback

Question 10

Perform a second order polynomial transform on both the training data and testing data. Create and fit a Ridge regression object using the training data, set the regularisation parameter to 0.1, and calculate the R^2 utilising the test data provided. Take a screenshot of your code and the R^2 .

```
[68]: from sklearn.preprocessing import PolynomialFeatures
      from sklearn.linear_model import Ridge
      from sklearn.metrics import r2_score

      # Perform second order polynomial transform on the training data
      poly = PolynomialFeatures(degree=2)
      X_train_poly = poly.fit_transform(X_train)

      # Perform second order polynomial transform on the testing data
      X_test_poly = poly.transform(X_test)

      # Create a Ridge regression object with regularization parameter of 0.1
      ridge = Ridge(alpha=0.1)

      # Fit the Ridge regression object using the training data
      ridge.fit(X_train_poly, y_train)
```

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```
# Perform second order polynomial transform on the testing data
X_test_poly = poly.transform(X_test)

# Create a Ridge regression object with regularization parameter of 0.1
ridge = Ridge(alpha=0.1)

# Fit the Ridge regression object using the training data
ridge.fit(X_train_poly, y_train)

# Make predictions using the testing data
y_pred = ridge.predict(X_test_poly)

# Calculate the R^2 score
r2 = r2_score(y_test, y_pred)

print(f'R^2 score: {r2:.4f}')
```

R^2 score: 0.7003

Once you complete your notebook you will have to share it. Select the icon on the top right a marked in red in the image below, a dialogue box should open, and select the option all content excluding sensitive code cells.

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