

Observing effects of L2 penalty in polynomial regression



7/7 questions correct

Quiz passed!

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1.

We first fit a 15th order polynomial model using the 'sqft_living' column of the 'sales' data frame, with a tiny L2 penalty applied.

Which of the following ranges contains the learned value for the coefficient of feature power_1?



2.

Next, we split the sales data frame into four subsets (set_1, set_2, set_3, set_4) and fit a 15th order polynomial model using each of the subsets.

For the models learned in each of these training sets, what are the smallest value you learned for the coefficient of feature power_1? Choose the range that contains this value.



3.

This question refer to the same models as the previous question.

For the models learned in each of these training sets, what are the largest value you learned for the coefficient of feature power_1? Choose the range that contains this value.



4.

Using the same 4 subsets (set_1, set_2, set_3, set_4), we train 15th order polynomial models again, but this time we apply a large L2 penalty.

For the models learned with the high level of regularization in each of these training sets, what are the smallest value you learned for the coefficient of feature power_1? Choose the range that contains this value.

✓ 5.

This question refer to the same models as the previous question.

For the models learned with the high level of regularization in each of these training sets, what are the largest value you learned for the coefficient of feature power_1? Choose the range that contains this value.

✓ 6.

This question refers to the section "selecting an L2 penalty via cross-validation".

What is the best value for the L2 penalty according to 10-fold validation?

✓ 7.

Using the best L2 penalty found above, train a model using all training data. Which of the following ranges contains the RSS on the TEST data of the model you learn with this L2 penalty?
