Using LASSO to select features

6/6 questions correct

Quiz passed!

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1.

We learn weights on the entire house dataset, using an L1 penalty of 1e10 (or 5e2, if using scikit-learn). Some features are transformations of inputs; see the reading.

Which of the following features have been chosen by LASSO, i.e. which features were assigned nonzero weights? (Choose all that apply)

2.

We split the house sales dataset into training set, test set, and validation set and choose the l1_penalty that minimizes the error on the validation set.

In which of the following ranges does the best l1_penalty fall?

3.

Using the best value of l1_penalty as mentioned in the previous question, how many nonzero weights do you have?

4.

We explore a wide range of l1_penalty values to find a narrow region of l1_penaty values where models are likely to have the desired number of non-zero weights (max_nonzeros=7).

What value did you find for l1_penalty_max?

If you are using GraphLab Create, enter your answer in simple decimals without commas (e.g. 1131000000), rounded to nearest millions.

If you are using scikit-learn, enter your answer in simple decimals without commas (e.g. 4313), rounded to nearest integer.

✔ 5.

We then explore the narrow range of l1_penalty values between l1_penalty_min and l1_penalty_max.

What value of l1_penalty in our narrow range has the lowest RSS on the VALIDATION set and has sparsity equal to max_nonzeros?

If you are using GraphLab Create, enter your answer in simple decimals without commas (e.g. 1131000000), rounded to nearest millions.

If you are using scikit-learn, enter your answer in simple decimals without commas (e.g. 4342), rounded to nearest integer.

✔ 6.

Consider the model learned with the l1_penalty found in the previous question. Which of the following features has non-zero coefficients? (Choose all that apply)
