

Using LASSO to select features



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0 / 1
points

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)



1 / 1
points

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?



1 / 1
points

3.
Using the best value of $l1_penalty$ as mentioned in the previous question, how many nonzero weights do you have?



1 / 1
points

4.

We explore a wide range of `l1_penalty` values to find a narrow region of `l1_penalty` 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.



1 / 1
points

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.



0 / 1
points

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)

