Ridge Regression

✖ **5/9** points earned (55%)

You haven't passed yet. You need at least 80% to pass.
Review the material and try again! You have 3 attempts every 8 hours.

Review Related Lesson

✔ 1 / 1
points

1.

Which of the following is NOT a valid measure of overfitting?

✖ 0 / 1
points

2.

In ridge regression, choosing a large penalty strength λ tends to lead to a model with (choose all that apply):

✔ 1 / 1
points

3.

Which of the following plots best characterize the trend of bias, variance, and generalization error (all plotted over λ)?

✖ 0 / 1
points

4.

In ridge regression using unnormalized features, if you double the value of a given feature (i.e., a specific column of the feature matrix), what happens to the estimated coefficients for every other feature? They:

✓   1 / 1
points

5.
If we only have a small number of observations, K-fold cross validation provides a better estimate of the generalization error than the validation set method.

✓   1 / 1
points

6.
10-fold cross validation is more computationally intensive than leave-one-out (LOO) cross validation.

✗   0 / 1
points

7.
Assume you have a training dataset consisting of N observations and D features. You use the closed-form solution to fit a multiple linear regression model using ridge regression. To choose the penalty strength λ, you run leave-one-out (LOO) cross validation searching over L values of λ. Let Cost(N,D) be the computational cost of running ridge regression with N data points and D features. Assume the prediction cost is negligible compared to the computational cost of training the model. Which of the following represents the computational cost of your LOO cross validation procedure?

✓   1 / 1
points

8.

Assume you have a training dataset consisting of 1 million observations. Suppose running the closed-form solution to fit a multiple linear regression model using ridge regression on this data takes 1 second. Suppose you want to choose the penalty strength λ by searching over 100 possible values. How long will it take to run leave-one-out (LOO) cross-validation for this selection task?

✖ 0 / 1
points

9.

Assume you have a training dataset consisting of 1 million observations. Suppose running the closed-form solution to fit a multiple linear regression model using ridge regression on this data takes 1 second. Suppose you want to choose the penalty strength λ by searching over 100 possible values. If you only want to spend about 1 hour to select λ, what value of k should you use for k-fold cross-validation?

👍 👎 🏳