

Quiz: Overfitting

Due Feb 15 at 3:30pm

Points 4

Questions 4

Time Limit 10 Minutes

Instructions

This is an individual quiz with a 10 minutes limit.

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	6 minutes	4 out of 4

Score for this quiz: **4** out of 4

Submitted Feb 3 at 9:13pm

This attempt took 6 minutes.

Question 1

1 / 1 pts

When do you have to be concerned about overfitting?



When you have too many observations relative to the number of features in the data.



When you have large outliers in your data.



When you run too many regressions.



When you have too many features in your model relative to the number of observations in the data.

Correct!

Question 2

1 / 1 pts

What happens when you add a large number of features (independent variables) in your model, relative to the number of observations in your data?

- ☐ Your out-of-sample model becomes more and more accurate
- ☐ You fit the out-of-sample data better and better, but your in-sample accuracy worsens.
- ☒ You fit the in-sample data better and better, but your out-of-sample accuracy worsens.
- ☐ Your MSE does not change

Correct!

Question 3

1 / 1 pts

What is machine learning?

- ☐ It is a set of statistical tools to find the smallest in-sample MSE.
- ☐ It is a set of statistical tools to overfit the data.
- ☒ It is a set of statistical tools to find which input variables to use in the model to maximize the out-of-sample accuracy.
- ☐ It is a set of statistical tool to learn about the world.

Correct!

Question 4

1 / 1 pts

What is cross-validation?

☐ It is a way to train the model out-of-sample, and check its accuracy in-sample

☐ It is a way to validate the model using in-sample data.

☐ It is a way to validate data across different models.

☒ It is a way to train the model in-sample, and check its accuracy out of sample.

Correct!

Quiz Score: **4** out of 4