Quiz 1

Quiz, 5 questions

Try again once you are ready.

Required to pass: 80% or higher

You can retake this quiz up to 3 times every 8 hours.

Back to Week 1

Retake

✗ 0 / 1 points

1. Which of the following are components in building a machine learning algorithm?

- ○ Deciding on an algorithm.
- ◉ Machine learning

This should not be selected

- ○ Artificial intelligence
- ○ Training and test sets
- ○ Statistical inference

✓ 1 / 1 points

2. Suppose we build a prediction algorithm on a data set and it is 100% accurate on that data set. Why might the algorithm not work well if we collect a new data set?

- ○ We have too few predictors to get good out of sample accuracy.
- ○ We may be using a bad algorithm that doesn't predict well on this kind of data.
- ◉ Our algorithm may be overfitting the training data, predicting both the signal and the noise.

Correct

- ○ We have used neural networks which has notoriously bad performance.

✓ 1 / 1 points

3. What are typical sizes for the training and test sets?

- ○ 90% training set, 10% test set
- ◉ 60% in the training set, 40% in the testing set.

Correct

- ○ 10% test set, 90% training set
- ○ 50% training set, 50% test set

✓ 1 / 1 points

4. What are some common error rates for predicting binary variables (i.e. variables with two possible values like yes/no, disease/normal, clicked/didn't click)? Check the correct answer(s).

- ◉ Accuracy

Correct

- ○ R^2
- ○ Correlation
- ○ Root mean squared error
- ○ Median absolute deviation

✗ 0 / 1 points

5. Suppose that we have created a machine learning algorithm that predicts whether a link will be clicked with 99% sensitivity and 99% specificity. The rate the link is clicked is 1/1000 of visits to a website. If we predict the link will be clicked on a specific visit, what is the probability it will actually be clicked?

- ◉ 0.009%

This should not be selected

- ○ 50%
- ○ 9%
- ○ 89.9%
