Quiz 1

Back to Week 1

4/5 points earned (80%)

Quiz passed!

0 / 1 points

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

- Machine learning
- Artificial intelligence
- Collecting data to answer the question.
- Training and test sets

Incorrect Response

- 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 used neural networks which has notoriously bad performance.
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Our algorithm may be overfitting the training data, predicting both the signal and the noise.

Correct Response

- We have too few predictors to get good out of sample accuracy.
- We may be using bad variables that don't explain the outcome.v

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1 / 1 points

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

- 50% in the training set, 50% in the testing set.
- 80% training set, 20% test set

Correct Response

- 90% training set, 10% test set
- 0% training set, 100% test set.

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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).

- R^2
- Sensitivity

Correct Response

- Correlation
- Root mean squared error
- Median absolute deviation

1 / 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?

- 50%
- 89.9%
- 9%

Correct Response

- 90%