Quiz 1

Quiz, 5 questions

4/5 points (80%)

✔ Congratulations! You passed!

Next Item

✖ 0 / 1 points

1.
Which of the following are components in building a machine learning algorithm? Check the correct answer(s).

- [ ] Asking the right question.

Correct

- [ ] Machine learning

Un-selected is correct

- [ ] Statistical inference

Un-selected is correct

- [ ] Training and test sets

This should not be selected

- [ ] Artificial intelligence

Un-selected is correct

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

Correct

1 / 1 points

3.

What are typical sizes for the training and test sets?

- 90% training set, 10% test set
- 10% test set, 90% training set
- 50% training set, 50% test set
- 60% in the training set, 40% in the testing set.

Correct

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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).

- [ ] Root mean squared error
- [ ] Correlation
- [ ] R^2
- [x] Sensitivity

Correct

- [ ] Median absolute deviation

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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?

- [ ] 89.9%
- [ ] 50%
- [ ] 0.009%
- [x] 9%

Correct

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