Quiz 1

3/5 questions correct

You haven't passed yet. You need at least 4 questions correct to pass.
Review the material and try again! You have 3 retakes every 8 hours.

Review Related Lesson (/learn/practical-machine-learning/home/week/1)

1.

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

- [x] Training and test sets

Sorry, that's incorrect.

- [ ] Artificial intelligence

Well done!

- [ ] Statistical inference

Well done!

- [x] Deciding on an algorithm.

Well done!

- [x] Machine learning

Sorry, that's incorrect.

✔ 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 may be using bad variables that don't explain the outcome.v
- [ ] We have used neural networks which has notoriously bad performance.
- [x] Our algorithm may be overfitting the training data, predicting both the signal and the noise.

Well done!

- [ ] We have too few predictors to get good out of sample accuracy.

✔ 3.

What are typical sizes for the training and test sets?

- [ ] 50% in the training set, 50% in the testing set.
- [ ] 0% training set, 100% test set.
- [x] 80% training set, 20% test set

Well done!

- [ ] 90% training set, 10% test set

✖ 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)?

- [x] Root mean squared error

Sorry, that's incorrect.

- [x] Median absolute deviation

Sorry, that's incorrect.

- [x] Accuracy

Well done!

- [ ] R^2

Well done!

- [ ] Correlation

Well done!

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%
- 99.9%
- 9%

Well done!

- 99%