Quiz 1

4/5 questions correct

Quiz passed!

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1.

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

- [x] Deciding on an algorithm.
- [x] Creating features.
- [x] Estimating parameters.
- [x] Collecting data to answer the question.
- [ ] Asking the right question.

☐ Evaluating the prediction.

✔ 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 a bad algorithm that doesn't predict well on this kind of data.
- We have too few predictors to get good out of sample accuracy.
- 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.

Well done!

✔ 3.

What are typical sizes for the training and test sets?

- 0% training set, 100% test set.
- 50% in the training set, 50% in the testing set.
- 90% training set, 10% test set
- 80% training set, 20% test set

Well done!

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)?

- [ ] R^2

Well done!

- [ ] Root mean squared error

Sorry, that's incorrect.

- [ ] Correlation

Well done!

- [ ] Median absolute deviation

Sorry, that's incorrect.

- [ ] Specificity

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%
- ○ 89.9%

9%

Well done!

0.009%