Feedback — Quiz 1

Help Center

You submitted this quiz on **Wed 13 May 2015 5:01 PM PDT**. You got a score of **15.00** out of **15.00**.

Question 1

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

Your Answer		Score	Explanation
(•) Evaluating the prediction.	✔	3.00	
( ) Statistical inference			
( ) Machine learning			
( ) Training and test sets			
Total		3.00 / 3.00	

Question 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?

Your Answer		Score	Explanation
( ) We may be using bad variables that don't explain the outcome.v			
(•) Our algorithm may be overfitting the training data, predicting both the signal and the noise.	✔	3.00	
( ) 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.	
Total	3.00 / 3.00

Question 3

What are typical sizes for the training and test sets?

Your Answer		Score	Explanation
◉ 60% in the training set, 40% in the testing set.	✔	3.00	
○ 0% training set, 100% test set.			
○ 20% test set, 80% training set.			
○ 80% training set, 20% test set			
Total		3.00 / 3.00	

Question 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)?

Your Answer		Score	Explanation
◉ Predictive value of a positive	✔	3.00	
○ R^2			
○ Correlation			
○ P-values			

Total	3.00 / 3.00

Question 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?

Your Answer		Score	Explanation
○ 89.9%			
◉ 9%	✔	3.00	
○ 0.009%			
○ 99%			
Total		3.00 / 3.00	