Feedback — Quiz 1

Help

You submitted this quiz on **Thu 22 Jan 2015 6:11 PM PST**. You got a score of **15.00** out of **15.00**. However, you will not get credit for it, since it was submitted past the deadline.

Question 1

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

Your Answer		Score	Explanation
○ Machine learning			
○ Artificial intelligence			
◉ Creating features.	✔	3.00	
○ Statistical inference			
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 have used neural networks which has notoriously bad performance.		
○ 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.		

◉ Our algorithm may be overfitting the training data, predicting both the signal and the noise.	✔	3.00
Total		3.00 / 3.00

Question 3

What are typical sizes for the training and test sets?

Your Answer		Score	Explanation
○ 90% training set, 10% test set			
○ 100% training set, 0% test set.			
○ 10% test set, 90% training set			
◉ 60% in the training set, 40% in the testing set.	✔	3.00	
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
○ P-values			
○ Root mean squared error			
○ Median absolute deviation			
◉ Accuracy	✔	3.00	
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
(•) 9%	✔	3.00	
( ) 90%			
( ) 99.9%			
( ) 50%			
Total		3.00 / 3.00	