



Quiz 1

[Continue Course \(/learn/practical-machine-learning/lecture/Bu9ns/caret-package\)](/learn/practical-machine-learning/lecture/Bu9ns/caret-package)



5/5 points
earned (100%)

[Back to Week 1 \(/learn/practical-machine-learning/home/week/1\)](/learn/practical-machine-learning/home/week/1)

Quiz passed!



1 / 1
points

1.

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



Deciding on an algorithm.



Correct Response



Artificial intelligence



Training and test sets



Machine learning

☐ Statistical inference



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



Correct Response

- ☐ We have too few predictors to get good out of sample accuracy.
 - ☐ We may be using bad variables that don't explain the outcome.v
-



1 / 1
points

3.

What are typical sizes for the training and test sets?

- ☐ 20% test set, 80% training set.

- ☐ 90% training set, 10% test set
- ☐ 100% training set, 0% test set.
- ☒ 60% in the training set, 40% in the testing set.

Correct Response



1 / 1
points

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).

- ☐ Correlation
- ☒ Predictive value of a positive

Correct Response

- ☐ R^2
 - ☐ Root mean squared error
 - ☐ Median absolute deviation
-



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?

☐ 0.009%

☒ 9%



Correct Response

☐ 99%

☐ 89.9%

