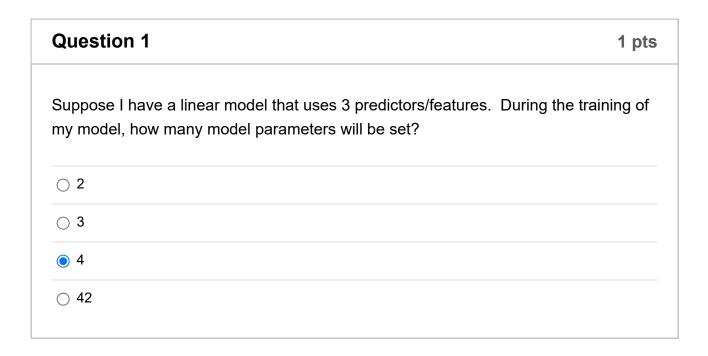
Linear Regression

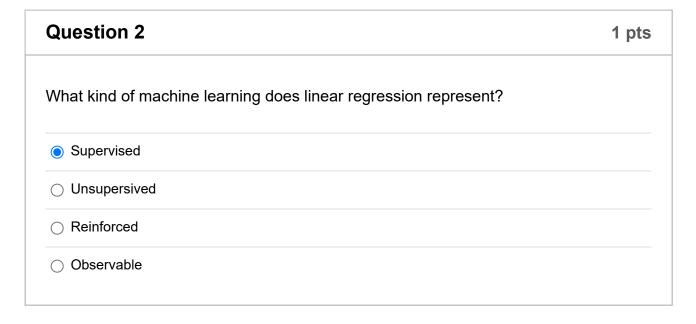
Started: Feb 18 at 9:23pm

Quiz Instructions

Read the section 'In Depth: Linear Regression' in the Python Data Science Handbook (https://jakevdp.github.io/PythonDataScienceHandbook/05.06-linear-regression.html) up to, but not including, the subsection on 'Regularization'. This involves only a few pages of reading.

This is a homework assignment. All resources, such as the book, lectures, internet, Python is available.





Question 3	1 pts
(T/F) With linear regression, you are likely to obtain a lower RMSE on test da scale your predictor variables first.	ata if you
○ True	
False	

Question 4	1 pts
Which takes longer to train, KNN regression or linear regression? (Consider till perform arithmetic operations only.)	me to
KNN regression	
○ linear regression	
○ c. it depends on the number of rows of training data	
○ d. it depends on the number of predictors	

Question 5 1 pts

I have a linear model that predicts the cost of tuition at a university based on the number of students at the university.

My model predicts a yearly tuition of \$22,000 dollars, if there are 12,000 students at a university, and \$35,000 dollars if there are 2,000 students at a university.

According to this model, what would my model predict for a university with 6,500 students?

Enter your result as an integer, such as 100. Answers within the error margin will be accepted.

29,150

Question 6	1 pts
Suppose I want to fit a linear model to some training data. Which parts of the data do I need?	training
○ predictor values only	
○ target values only	
both predictor and target values	

With linear regression, which quantity are we attempting to minimize during the training process? • the average of the squared differences between predicted target values and actual target values • the average of the absolute value of the differences between predicted target values and actual target values • the average of the differences between the predicted target values and actual target values

Question 8 1 pts

Here is a model that estimates the monthly rental price of an office in Cork, Ireland (in dollars):

 $price = \text{-}0.151 + 0.63 \times size \text{-} 0.178 \times floor + 0.071 \times internetSpeed$

The units for size are square feet, and the units for internet Speed is Mb/sec.

What is the predicted rental price for a 850 square foot office on the 15th floor of a building with an internet speed of 100 Mb/sec?

260

540

780

Referring to the model of the last question, what would be the difference in price if the office were on the 18th floor instead of the 15th floor?

In other words, what is the new price minus the old price?

0.53

-0.53

-0.26

Referring again to the office model, would the price change associated with a change from the 15th to the 18th floor be the same as the price change associated with a change from the 18th to the 21st floor?

Select Yes/True or No/False.

True

False

No new data to save. Last checked at 12:44pm

Submit Quiz