

# Overfitting and regularization

Quiz, 4 questions

1  
point

1.

Select correct statements about overfitting:

- ☐ Overfitting happens when model is too simple for the problem
  - ☐ Overfitting is a situation where a model gives comparable quality on new data and on a training sample
  - ☒ Overfitting is a situation where a model gives lower quality for new data compared to quality on a training sample
  - ☒ Large model weights can indicate that model is overfitted
- 

1  
point

2.

What disadvantages do model validation on holdout sample have?

- ☒ It can give biased quality estimates for small samples
  - ☐ It requires multiple model fitting
  - ☒ It is sensitive to the particular split of the sample into training and test parts
- 

1  
point

3.

Suppose you are using k-fold cross-validation to assess model quality. How many times should you train the model during this procedure?

- ☐ 1
- ☒  $k$

# Overfitting and regularization

Quiz, 4 questions

  $k^2$

1  
point

4.

Select correct statements about regularization:

- ☒ Regularization restricts model complexity (namely the scale of the coefficients) to reduce overfitting
- ☐ Weight penalty reduces the number of model parameters and leads to faster model training
- ☐ Reducing the training sample size makes data simpler and then leads to better quality
- ☒ Weight penalty drives model parameters closer to zero and prevents the model from being too sensitive to small changes in features

☐ I, **Jiadao Zhao**, understand that submitting work that isn't my own may result in permanent failure of this course or deactivation of my Coursera account.

[Learn more about Coursera's Honor Code](#)

Submit Quiz