

Quiz 6

Due Jun 5 at 10:15am **Points** 5 **Questions** 5 **Available** Jun 5 at 10am - Jun 5 at 10:19pm 12 hours and 19 minutes
Time Limit None

Instructions

The quiz is open book and open notes. The time is 15 minutes.

This quiz was locked Jun 5 at 10:19pm.

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	14 minutes	3 out of 5

Score for this quiz: **3** out of 5
Submitted Jun 5 at 10:14am
This attempt took 14 minutes.

Correct!	Question 1	1 / 1 pts
	What is the assumption behind the naive Bayes classifier?	
	<hr/>	
	<input checked="" type="radio"/> The features are independent of each other given the class.	
	<hr/>	
	<input type="radio"/> The class and features are independent of each other.	
	<hr/>	
	<input type="radio"/> The features are indepedent of each other.	

- ☐ The class is independent of the features.

Question 2

0.5 / 1 pts

Select all true statements among the following.

☐

The result of the Bayesian network structure learning does not depend on the order in which the variables are considered.

☒

Bayesian network structure and parameters (conditional probabilities) can be learned independently of each other.

☒

If a sparse network is consistent with a dataset, adding more edges without forming cycles can also be made consistent with it.

☒

When learning a Bayesian network, all else being equal, one would try to minimize the number of parents for each node.

You Answered

Correct!

Correct!

Question 3

0 / 1 pts

What is the greedy heuristic used to select a feature split in decision tree learning?

You Answered

☒ Select the split that minimizes information gain

☐ Select the split that minimizes surprise

☐ Select the split that maximizes entropy

Correct Answer

☐ Select the split that maximizes the mutual information

Question 4

0.5 / 1 pts

What causes overfitting during learning? Select all correct answers.

Correct!

☒ Noisy data

Correct!

☒ Too little training data

You Answered

☒ The hypothesis space is too restrictive, e.g., decision trees of only depth 1.

☐ Too large a training set

Question 5

1 / 1 pts

What is the name of the following approach to learning?

Draw multiple samples of the same size with replacement, learn a model from each sample, and classify test examples using majority vote among the models.

Correct!

☐ Stacking

☐ Voting

☒ Bagging

☐ Boosting

Quiz Score: **3** out of 5