Week 7 Quiz

Due Mar 15 at 11:59pm   **Points** 13   **Questions** 3
Time Limit 15 Minutes   **Allowed Attempts** 2

Instructions

instructions.png Instructions

This quiz consists of three questions. To be successful with the module quizzes, it's important to read the assigned chapters, practice exercises, and complete the interactive activities. Keep the following in mind:

- **Attempts:** You will have two attempts for this quiz with your highest score being recorded in the grade book.
- **Timing:** You will need to complete each of your attempts in one sitting, and you are allotted 15 minutes to complete each attempt.
- **Answers:** You may review your answer choices and compare them to the correct answers after your final attempt.

To start, click the "**Take the Quiz**" button. When finished, click the "**Submit Quiz**" button.

Technical Support Technical Support

Need help using Canvas Quizzes? If so, please review the following guide: **Canvas Student Guide - Quizzes (https://community.canvaslms.com/docs/DOC-10701#jive_content_id_Quizzes)**

<div style="text-align:center">

Take the Quiz Again

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Attempt History

	Attempt	Time	Score
LATEST	**Attempt 1**	1 minute	13 out of 13

Attempt	**Time**	**Score**

Score for this attempt: **13** out of 13

Submitted Mar 12 at 11:47pm

This attempt took 1 minute.

Question 1   **4 / 4 pts**

If P(A|B) = P(A), which of the following is TRUE?

Correct!

- ⦿ P(AB) = P(A)P(B)

- ○ P(A|B) = P(B|A)

- ○ P(A) = P(B)

- ○ P(AB) = P(A) + P(B)

Question 2   **4 / 4 pts**

Which of the following statements is NOT correct?

Correct!

- ⦿ The EM algorithm is useful only when there are no unobservable variables in the learning problem.

- ○ The naive Bayes classifier makes a simplifying assumption that the attribute values are conditionally independent given the target value.

○ The expected misclassification error for the Gibbs algorithm is at most twice the expected error of the Bayes optimal classifier under certain conditions.

○ No other classification method can outperform the Bayes optimal classifier on average if the same hypothesis space and the same prior knowledge is assumed.

Question 3   5 / 5 pts

Assume there are three hypotheses, h1, h2, h3, which are trained from the same data set D. The accuracy of the three hypotheses are P(h1) = 0.45, P(h2) = 0.3, P(h3) = 0.25.

Given a new instance x, the predicted results of the three hypotheses are h1(x) = yes, h2(x) = no, h3(x) = no. (Assume binary target values of "yes" and "no.")

What is the predicted result of the Bayes optimal classifier using h1, h2, and h3?

Correct!

⦿ No

○ Yes

Quiz Score: **13** out of 13