CS161 - Quiz 6 Results for ZHANG, CHARLES XIAN

Score for this quiz: **3** out of 4
Submitted Mar 10 at 6:08pm
This attempt took 2 minutes.

Question 1

1 / 1 pts

$Pr(\alpha) = Pr(\alpha \wedge \beta)\, Pr(\alpha \wedge \neg\beta)$ *for any events* α *and* β

- ○ True
- ◉ False

Correct!

Question 2

0 / 1 pts

If X and Y are probabilistically independent, then they must continue to be independent given any variable Z.

ou Answered
- ◉ True

orrect Answer
- ○ False

Question 3

1 / 1 pts

The local semantics of Bayesian network says:

- ○ Every node is independent of its parents given its non-descendants

- Every node is independent of its descendants given its parents
- None of the others
- Every node is independent of its parents given its descendants

Correct!

- (selected) Every node is independent of its non-descendants given its parents

Question 4

1 / 1 pts

Consider a Bayesian network $X_1 \longrightarrow X_2 \longrightarrow \ldots \longrightarrow X_n$ (a chain with n nodes). Assume that each variable X_i has only two values x_i and $\overline{x_i}$. Then $Pr\left(x_3 \mid \overline{x_1}\right)$ is equal to:

Correct!

- (selected) $Pr\left(x_3 \mid x_2\right) Pr\left(x_2 \mid \overline{x_1}\right) + Pr\left(x_3 \mid \overline{x_2}\right) Pr\left(\overline{x_2} \mid \overline{x_1}\right)$
- $Pr\left(x_3, \overline{x_1}\right) Pr\left(\overline{x_1}\right)$
- None of the others
- $Pr\left(x_3\right)$
- $Pr\left(x_3 \mid x_2, \overline{x_1}\right) + Pr\left(x_3 \mid \overline{x_2}, \overline{x_1}\right)$

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