Coursera

Probabilistic Graphical Models

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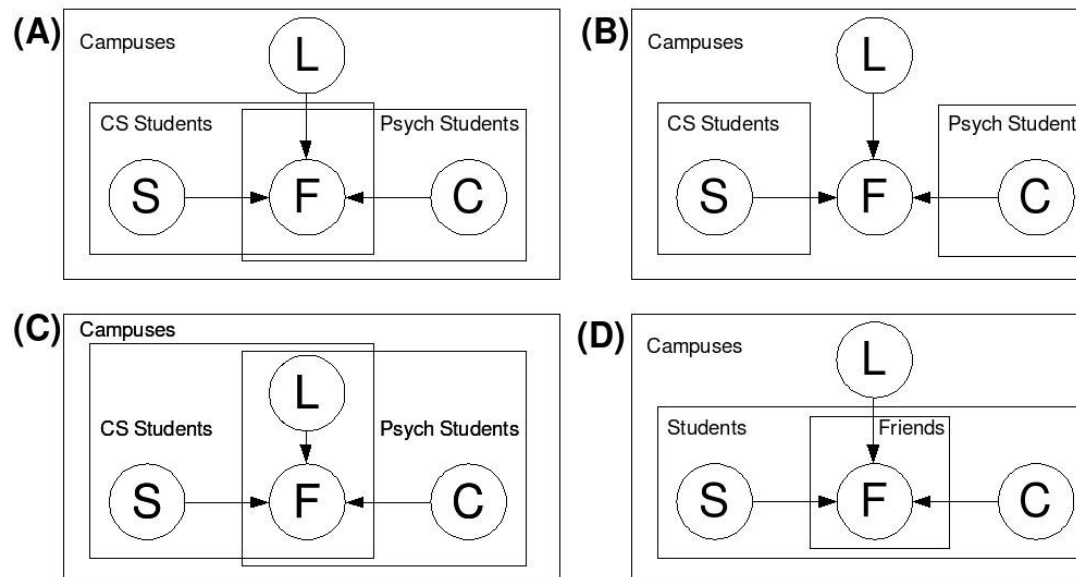
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Feedback — Week 2 Review

You achieved a score of 3.00 out of 3.00

Question 1

Template Model Representation. Consider the following scenario:

On each campus there are several Computer Science students and several Psychology students (ea student belongs to one xor the other group). We have a binary variable L for whether the campus is large, a binary variable S for whether the CS student is shy, a binary variable C for whether the Psychology student likes computers, and a binary variable F for whether the Computer Science stud is friends with the Psychology student. Which of the following plate models can represent this scenar

Your Answer		Score	Explanation
● (A)	✔	1.00	(A) is right because there are separate plates for CS and Psych students who do not overlap; the student plates are within the campuses plate sin every student is on a campus; the location node is on the campus plate since location is only a property of campuses; the properties of types of students nodes are on those students' plates; and the friend node is on a the plates since friendship involves both types of students and the campu
Total		1.00	

Question 2

*I-Equivalence. Let Bayesian network G be a simple directed chain $X_1 \rightarrow X_2 \rightarrow \ldots \rightarrow X_n$ for s
number n. How many Bayesian networks are I-equivalent to G including G itself?

Your Answer		Score	Explanation
⦿ n	✔	1.00	The chain $X_1 \leftarrow \ldots \leftarrow X_i \rightarrow \ldots \rightarrow X_n$ is I-equivalent, where i can $\vdash$ 2 through n (when $i = n$, all arrows point left). Thus, there are $n - 1$ I-equivalent networks like this. Including the original network makes n.
Total		1.00	

Question 3

Partition Function. Which of the following is a use of the partition function?

Your Answer		Score	Explanation
⦿ One can divide factor products by the partition function in order to convert them into probabilities.	✔	1.00	This is a common (of the partition function.
Total		1.00	