Feedback — Assignment 6

Help

You submitted this quiz on **Sat 7 Dec 2013 4:42 PM PST**. You got a score of **7.00** out of **11.00**. You can attempt again, if you'd like.

In this assignment, your goal is to find sequential patterns of interest in asgn6-spm-data-v1.csv

Variables in this data set:

• anonid – which student it is
• obsnum – how many observations have been conducted for this student
• behavior-ontask – in this observation, the student was coded as on task (solitary)
• behavior-ontaskconv -- in this observation, the student was coded as on task (conversation)
• behavior-offtask-- in this observation, the student was coded as off task
• affect-frustrated – in this observation, the student was coded as frustrated
• affect-concentrating – in this observation, the student was coded as being in engaged concentration
• affect-confused -- in this observation, the student was coded as being confused
• affect-bored -- in this observation, the student was coded as being bored

This data set was previously published in

Baker, R.S.J.d., Moore, G., Wagner, A., Kalka, J., Karabinos, M., Ashe, C., Yaron, D. (2011) The Dynamics Between Student Affect and Behavior Occuring Outside of Educational Software. *Proceedings of the 4th bi-annual International Conference on Affective Computing and Intelligent Interaction.*

The goal of this assignment is to find sequential patterns in the data, which are unlikely to simply be due to chance. I recommend you use RapidMiner 5.3 to complete this assignment, as other packages will be likely to produce slightly different results.

Question 1

Set up a RapidMiner process using Read CSV and the GSP operator (Generalized Sequential Patterns – *not* the WEKA version W-GeneralizedSequentialPatterns). What should your customer id be?

Your Answer		Score	Explanation
⬚ affect			
⦿ anonid	✔	1.00	

🔘 obsnum

🔘 behavior

Total	1.00 / 1.00

Question 2

What should your time attribute be?

Your Answer		Score	Explanation
🔘 obsnum	✔	1.00	
🔘 behavior			
🔘 affect			
🔘 anonid			
Total		1.00 / 1.00	

Question 3

Set min support = 0.6, window size = 0.0, max gap = 5.0, min gap = 0.0, positive value = 1. Which of these association rules has the highest support?

Your Answer	Score	Explanation
🔘 behavior-offtask → behavior-offtask		
🔘 affect-concentrating → affect-concentrating → affect-concentrating → affect-concentrating → behavior-ontask AND affect-concentrating		
🔘 behavior-ontask → behavior-ontask		
🔘 behavior-ontask → affect-concentrating ✔	1.00	
Total	1.00 / 1.00	

Question 4

[this question is deprecated due to instructor error] Try playing with the association rules by setting window size = 2.0, and looking at the new rules created.

Your Answer		Score	Explanation
○ do not choose this answer			
○ do not choose this answer			
◉ choose this answer	✔	1.00	
○ do not choose this answer			
Total		1.00 / 1.00	

Question 5

Set window size back to 0.0. Set max gap to 1.0. Which is the rule with the most items?

Your Answer		Score	Explanation
◉ behavior-ontask AND affect-concentrating → behavior-ontask AND affect-concentrating	✔	1.00	
○ behavior-ontask → behavior-ontask → behavior-ontask AND affect-concentrating			
○ affect-concentrating → affect-concentrating			
○ affect-concentrating → behavior-ontask → affect-concentrating			
Total		1.00 / 1.00	

Question 6

Which of these is a reason why you might want to create a window size above 0?

Your Answer		Score	Explanation

○ Unrelated events may be separated by a few seconds

○ Unrelated events may occur at exactly the same time

○ Related events may occur at exactly the same time

◉ Related events may be linked but separated by a few   ✔   1.00
seconds

Total		1.00 / 1.00

Question 7

How many students had the sequential rule behavior-ontask -> affect-concentrating (with max gap = 1.0 and window size = 0.0), at least once? (Hint: RapidMiner may not be the easiest tool to compute this with)

You entered:

8

Your Answer		Score	Explanation
8	✖	0.00	
Total		0.00 / 1.00	

Question 8

What is the confidence for sequential rule behavior-ontask -> affect-concentrating (with max gap = 1.0 and window size = 0.0)? Give three digits after the decimal point, rounding to nearest number. Ex: 0.12345 rounds to 0.123, and 0.77777 rounds to 0.778. (Hint: RapidMiner may not be the easiest tool to compute this with)

You entered:

0.025

Your Answer		Score	Explanation

0.025	✖	0.00
Total		0.00 / 1.00

Question 9

What is the cosine for sequential rule behavior-ontask → affect-concentrating? (with max gap = 1.0 and window size = 0.0) Give three digits after the decimal point, round to nearest number. (Hint: RapidMiner may not be the easiest tool to compute this with)

You entered:

0.861

Your Answer		Score	Explanation
0.861	✖	0.00	
Total		0.00 / 1.00	

Question 10

What is the lift for sequential rule behavior-ontask → affect-concentrating (with max gap = 1.0 and window size = 0.0)? Give three digits after the decimal point, round to nearest number. (Hint: RapidMiner may not be the easiest tool to compute this with)

You entered:

0.761

Your Answer		Score	Explanation
0.761	✖	0.00	
Total		0.00 / 1.00	

Question 11

Would Merceron & Yacef say that this is an interesting association rule?

Your Answer		Score	Explanation
⚪ No, because cosine is below threshold			
⚪ No, because lift is below threshold			
⚪ No, because cosine is over threshold			
⚪ Yes, because both lift and cosine are over threshold			
⚪ Yes, because lift is over threshold			
⚪ No, because lift is over threshold			
⚫ Yes, because cosine is over threshold	✔	1.00	
Total		1.00 / 1.00	