CS 422 Homework5

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1. Exercises

Tan, Ch. 5 (Association Analysis)

Question 1, 2, 9(a), 9(b)

1.1-1-(a)

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  Milk -> Bread.  This rule is uninteresting.
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1.1-1-(b)

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 Milk -> Tuna. This rule is uninteresting.
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1.1-1-(c)

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  Cooking oil -> Laundry detergent. This rule is uninteresting.
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1.1-1-(d)

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  Vodka -> Caviar. This rule is interesting.
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1.1-2-(a)

Answer:

s({e}) = $\frac{8}{10}$

s({b, d}) = $\frac{2}{10}$

s({b, d, e}) = $\frac{2}{10}$

1.1-2-(b)

Answer:

c(bd –> e) = $\frac{2}{10}$ ÷ $\frac{2}{10}$ =100%

c(e –> bd) = $\frac{2}{10}$ ÷ $\frac{8}{10}$ =25%

No, confidence is not a symmetric measure.

1.1-2-(c)

Answer:

s({e}) = $\frac{4}{5}$

s({b, d}) = $\frac{5}{5}$

s({b, d, e}) = $\frac{4}{5}$

1.1-2-(d)

Answer:

c(bd –> e) = $\frac{4}{5}$ ÷ $\frac{5}{5}$ = 80%

c(e -> bd) = $\frac{4}{5}$ ÷ $\frac{4}{5}$ = 100%

1.1-2-(e)

Answer:

There are no obvious relationships.

1.1-9-(a)

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L1, L3, L5, L9, and L11
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1.1-9-(b)

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{1, 4, 5}, {1, 5, 8}, and {4, 5, 8}
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