[CSCI 4502] HW-3

Michael Ghattas

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Question-1

Part(a)

$$-> lift(Bike, Ski) = \frac{\frac{600}{4000}}{\frac{2500}{4000} \cdot \frac{1300}{4000}} = 0.7384615$$

-> Since lift(Bike, Ski) < 1, we can conclude Bike and Ski are negatively dependent.

Part(b)

-> Min. Support = 15% = 0.15
-> Min. Confidence = 40% = 0.4
-> Support = $\dfrac{600}{4000}$ = 0.15
-> Support (0.15) = Min. Support (0.15)
-> Confidence = $\dfrac{600}{1300}$ = 0.4615384
-> Confidence (0.4615384) > Min. Confidence (0.4)
-> Since the Support and Confidence both meet the threshold, we can conclude the association rule is strong.

End.