Frequent Itemsets and Association Rules Quiz | Coursera

Frequent Itemsets and Association Rules Quiz

≔ Hide menu Congratulations! You passed! Go to next item **Introduction to Frequent Pattern Analysis** Frequent Itemsets and Association Rules Quiz Grade 100% Latest Submission Grade 100% **To pass** 60% or higher **Frequent Itemsets and Association Rules** Video: Frequent Itemsets and Association Rules **Review Learning Objectives** Reading: Frequent Itemsets Demo **1.** What is the primary goal of frequent itemset mining? 1 / 1 point Reading: Association Rules Demo O To find the items that occur most frequently in a dataset. Quiz: Frequent Itemsets and Association Rules Quiz Submit your assignment O To identify items that have the highest support in the dataset. Try again **Due** Feb 4, 11:59 PM IST To discover sets of items that appear together often (frequently) in a transactional dataset. O To identify the association between items based on their occurrence in the dataset. Receive grade **View Feedback ⊘** Correct **To Pass** 60% or higher Correct! The primary goal of frequent itemset mining is to discover sets of items that frequently co-occur We keep your highest score in transactions. **2.** What is the support of an itemset in a transactional dataset? 1 / 1 point O The number of items in the itemset. The proportion of transactions that contain the itemset. The confidence that the itemset occurs in a transaction. The ratio of the itemset's occurrence in the dataset to the total number of transactions. **⊘** Correct Correct! Support is the proportion of transactions in which the itemset occurs, representing its frequency in the dataset. **3.** What is the confidence of an association rule in frequent itemset mining? 1 / 1 point The proportion of transactions that contain both the antecedent and the consequent of the rule. The conditional probability that the consequent occurs given that the antecedent is present in a The ratio of the number of rules in the dataset to the total number of transactions. The proportion of transactions containing only the consequent of the rule. **⊘** Correct Correct! Confidence is the conditional probability of the consequent occurring when the antecedent is **4.** What does a high confidence value for an association rule indicate? 1 / 1 point The rule has a strong predictive power, and the occurrence of the antecedent implies a high likelihood of The rule is statistically significant and likely to hold in the population. The rule is likely to be false due to an insufficient number of transactions supporting it. The rule is likely to be incorrect due to a low occurrence of the antecedent and the consequent. **⊘** Correct Correct! High confidence suggests that the occurrence of the antecedent strongly predicts the occurrence of the consequent. **5.** In frequent itemset mining, what is the lift of an association rule? 1 / 1 point The ratio of the support of the antecedent to the support of the consequent. The proportion of transactions where the antecedent and consequent both occur out of the total transactions. The ratio of the confidence of the rule to the expected confidence if the antecedent and consequent were independent. The conditional probability that the antecedent occurs given that the consequent is present in a transaction. **⊘** Correct Correct! Lift measures how much the occurrence of the consequent is influenced by the presence of the antecedent compared to if they were independent. **6.** What does a lift value greater than 1 indicate for an association rule? **1 / 1 point** The rule has a low predictive power, and the occurrence of the antecedent has little effect on the The rule is meaningful and has a positive impact, showing that the occurrence of the antecedent increases the likelihood of the consequent beyond random chance. The rule is irrelevant and has no impact on the occurrence of the antecedent or consequent. The rule is incorrect, and the occurrence of the antecedent reduces the likelihood of the consequent. **⊘** Correct Correct! A lift greater than 1 indicates a positive correlation between the antecedent and consequent, meaning their occurrence is not independent. 7. What does a lift value equal to 1 indicate for an association rule? **1 / 1 point** The rule has no meaningful association, and the occurrence of the antecedent is independent of the consequent. The rule is statistically significant, and the occurrence of the antecedent strongly influences the consequent. The rule is invalid, and the occurrence of the antecedent is likely to reduce the likelihood of the consequent. The rule is trivial and has no predictive power in the dataset. **⊘** Correct Correct! A lift value of 1 indicates independence between the antecedent and consequent.

8. What is the range of the lift values for association rules?

Correct! Lift values range from 0 to positive infinity, with 1 indicating independence.

O -1 to 1

O to 1

⊘ Correct

0 to positive infinity

1 to positive infinity

1 / 1 point