

COMP4433 Data Mining and Data Warehousing Applications

FAQ on Association Rule Mining II

1. Given the following transactional database for sequential association analysis. Let $min_sup=25\%$ and $min_conf=50\%$.

Customer	Transaction Time	Items
David	2 Feb 2002	30,50
David	10 Feb 2002	50
David	21 Feb 2002	70
John	5 Feb 2002	10,30
John	7 Feb 2002	50
John	16 Feb 2002	40,60,70
John	27 Feb 2002	50,90
Peter	16 Feb 2002	30,50,70
Aaron	5 Feb 2002	30
Aaron	7 Feb 2002	30, 50
Aaron	17 Feb 2002	70
Aaron	27 Feb 2002	50
Leon	13 Feb 2002	30

Modify the AprioriAll-based sequential pattern mining algorithm so that it allows reoccurrence of itemsets in frequent sequences, e.g., a customer bought itemset A and then itemset B will buy itemset A again in the future.

- (a) Find all frequent sequences using your modified algorithm.
- (b) Random pick one frequent 4-sequence, if there exists one, and generate the corresponding strong sequential association rule(s).