Abstract

Association Rule mining is a sub-discipline of data mining. Apriori algorithm is one of the most popular association rule mining technique. Apriori technique has a disadvantage that before generating a maximal frequent set it generates all possible proper subsets of maximal set. Therefore it is very slow as it requires many database scans before generating a maximal frequent itemset. In the method proposed in this paper entire database is scanned only once. Frequency count of all distinct transactions is stored in a hash map. Algorithm maintains an array of tables such that each table in the array contain frequency count of all potential k-itemsets. Binary search and the concept of longest common subsequence are used to efficiently extract maximal frequent itemset. Experimental results show that proposed algorithm performs better than apriori algorithm.

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Index Terms

Computer Science                 Algorithms

Keywords

Association rule mining , Apriori algorithm, Frequent itemset, Hashing, Longest common subsequence