

Compact structure representation in discovering frequent patterns for association rules

ABSTRACT

Frequent pattern mining is a key problem in important data mining applications, such as the discovery of association rules, strong rules and episodes. Structure used in typical algorithms for solving this problem operate in several database scans and a large number of candidate generation. This paper presents a compact structure representation called Flex-tree in discovering frequent patterns for association rules. Flex-tree structure is a lexicographic tree which finds frequent patterns by using depth first search strategy. Efficiency of mining is achieved with one scan of database instead of repeated database passes done in other methods and avoid the costly generation of large numbers of candidate sets, which dramatically reduces the search space.

Keyword: Frequent patterns; Candidate sets; Association rules; Lexicographic tree; Itemsets