Abstract

In this paper work the association rules are optimized in order to find most suitable rules from the number of association rule generation algorithms. In this context most frequently used association rule mining algorithms are targeted for study namely Apriori and FP-tree. Basically the association rules are developed using transactional datasets. Additionally the number of generated rules in Apriori is large enough; on the other hand the FP-tree algorithm generates a main tree and additional trees. Such kind of tree generate confuse the experimenter. Therefore in this work a concept is proposed by which the optimal rules from both the set of rules are selected for applications.

In this context two different concepts of the rule selection techniques are used first technique usages the sampling technique and second directly usage the outcomes of the Apriori and FP-Tree algorithm and make search from one algorithm’s rule set to others. In order to perform the search genetic algorithm is used which is used for optimal solution selection. According to the results sampling based technique needs additional computational resources as compared to
genetic algorithm based technique due to additional evaluation cycles. But both the algorithms are effectively capable to reduce the amount of rules generated by the selected algorithms.

References


Index Terms

Computer Science, Algorithms

Keywords

Data Mining, Association Rule, FP-Tee, Apriori, Frequent Pattern mining, Association Rule Mining, Genetic Algorithm