On an Approach for Rule Generation in Association Rule Mining

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Abstract : In Association Rule Mining, much attention has been paid for developing algorithms for large (frequent/closed/maximal) itemsets but very little attention has been paid to improve the performance of rule generation algorithms. Rule generation is an important part of Association Rule Mining. In this paper, a novel approach named NARG (Association Rule using Antecedent Support) has been proposed for rule generation that uses memory resident data structure named FCET (Frequent Closed Enumeration Tree) to find frequent/closed itemsets. In addition, the computational speed of NARG is enhanced by giving importance to the rules that have lower antecedent support. Comparative performance evaluation of NARG with fast association rule mining algorithm for rule generation has been done on synthetic datasets and real life datasets (taken from UCI Machine Learning Repository). Performance analysis shows that NARG is computationally faster in comparison to the existing algorithms for rule generation.