

VERY FAST MAXIMAL FREQUENT ITEMSET ALGORITHM: EFFICIENT MINING ALGORITHM FOR MAXIMAL ITEMSETS

¹R.SMEETA MARY, ²Dr.K.PERUMAL

¹Assistant Professor, Department of Computer Applications, Fatima College, Madurai, India

²Professor, Department of Computer Applications, Madurai Kamaraj University, Madurai, India

E-mail: ¹smeetamaryn@gmail.com, ²perumalmala@gmail.com

ABSTRACT

The instruments mainly used for mining association rules, multi-dimensional patterns, and correlations are mining the maximal frequent itemset. The existing works mainly focuses on finding the frequent itemsets. Any subset of a frequent set also is frequent and it will be more sufficient to mine only the set of maximal frequent itemsets. In this paper, a new approach, Very Fast Maximal Frequent Itemset Algorithm is proposed for mining maximal frequent itemsets. The searching methods consist of both depth-first traversal of the itemset and it is an effective method that significantly improves the mining performance. The first step of the algorithm that the problem of counting the number itemsets in a database of transactions. The transactions are arranged in descending order and the numbers are substitute to it and the operation is carried out to find maximal frequent item set. It also widen our complexity analysis to various data mining problems that deals data structures, such as graphs, sequences and trees that have attracted interest in research in recent years. Normally, in these problems we explore several variants of these mining problems in which the maximal frequent itemset and show the associated problems of counting the number of maximal frequent patterns. In a systematic experimental analysis, we isolate the special effects of individual components of VFMFIA. By running this over different types of data sets we compare the performance with previous work. From the systematic experimental comparison with previous work it indicates that different methods have varying strengths and weaknesses based on dataset characteristics. It is found that VFMFIA to be a highly efficient method to mine the exact set of maximal patterns.

Keywords: Very Fast Maximal Frequent Itemset algorithm (VFMFIA)

1 INTRODUCTION

Data mining is a technique that takes input as data and knowledge as outputs. One of the main and most important definitions of the data mining, which highlights the distinctive characteristics, is provided by Fayyad, Piatetsky-Shapiro and Smyth (1996), who define it as “the