Abstract

Frequent pattern mining is a researched area which is used for extracting interesting associations and correlations among item sets in transactional and relational database. Many algorithms of frequent pattern mining is been devised ranging from efficient and scalable algorithms in transactional database to numerous research frontiers and their wide applications. Many researches been done into FPM [1], but there are still several optimizations are required, so that FPM can be used more efficiently in data mining applications. For optimization purpose in many mining techniques data pre-processing plays an important role in reducing data size and also in lessening the time taken in database scans. This paper is a detailed study of problems and solutions of FPM techniques incorporated with pre-processing techniques. The intent of this paper is to summarize all major problems of FPM and their solutions. From this survey, it concludes that if FPM methods are merged with pre-processing techniques will produce results with better performance.
A Survey on Problems and Solutions of Frequent Pattern Mining with the use of Pre-Processing Techniques

- Thashmee Karunaratne, "Is Frequent Pattern Mining Useful In Building Predictive Models?" Stockholm University, Forum 100, Se-164 40 Kista, Sweden.
- Jiawei Han, Hong Cheng, Dong Xin Xifeng Yan, "Frequent Pattern Mining: Current Status And Future Directions"; Springer Science+Business Media, Llc 2007.
- Jiawei Han, Jian Pei, Iwen Yin, "Mining Frequent Patterns Without Candidate Generation: A Frequent-Pattern Tree Approach"; Received May 21, 2000; Revised April 21, 2001.
- Pei J, Han J, Mortazavi-Asl B, Pinto H, Chen Q, Dayal U, Hsu M-C, "Prefixspan: Mining Sequential Patterns Efficiently By Prefix-Projected Pattern Growth"; In: Proceeding Of the 2001 International Conference on Data Engineering (ICDE&amp;apos;01), Heidelberg, Germany, 2011.
- Han J, Pei J, Yin Y, "Mining Frequent Patterns without Candidate Generation"; In: Proceeding Of the 2000 ACM-SIGMOD International Conference on Management of Data (SIGMOD&amp;apos;00), Dallas, TX, Pp 1–12, 2000.
- Gosta Grahne and Jianfei Zhu, "Efficiently sing Prefix-trees in Mining Frequent Itemsets"; on ordia University Montreal, Canada, 2002.
On Database Systems For Advanced Applications, April 1997

- Pei Jian, Han Jiawei, Nishio Shojiro, Tang Shiwei, and Yang Dongqing, "H-Mine: Hyper-Structure Mining of Frequent Patterns in Large Databases", Proc. 2001 Int. Conf. on Data Mining, San Jose, CA, November 2001.
- Zaïane Osmar R. and Oliveira Stanley R. M. "Privacy preserving frequent itemset mining", Workshop on Privacy, Security, and Data Mining, in conjunction with the IEEE International Conference on Data Mining, Japan, December 2002.

**Index Terms**

Computer Science  Information Sciences

**Keywords**

Frequent Pattern Mining  Maximal frequent pattern  Data Pre-Processing