

一种基于矩阵和权重改进的 Apriori 算法

边根庆, 王 月

(西安建筑科技大学 信息与控制工程学院, 陕西 西安 710055)

摘 要: 提出基于矩阵和权重的一种改进算法——MW_Apriori 算法.该算法首先通过扫描一次事务数据库来构造 0-1 事务矩阵, 其次赋予项和事务权重, 并计算项的权重支持度, 从而得到频繁项集.实验结果表明, MW_Apriori 算法避免了数据库的重复扫描, 使得时间和空间的耗费显著减少, 同时能有效地挖掘出隐藏的、更有价值的事件.

关键词: 关联规则; MW_Apriori 算法; 事务矩阵; 权重支持度

An Improved Apriori Algorithm Based Matrix and Weight

BIAN Gen-qing, WANG Yue

(School of Information and Control Engineering, Xi'an University of Architecture and Technology, Xi'an 710055, China)

Abstract: An improved algorithm, which is called MW_Apriori algorithm is proposed based on the matrix and weight in this paper. Firstly, build the 0-1 transaction matrix by scanning transaction database. Then items and transactions are assigned to weights, and the weighted support of items are caculated, accordingly gettig the frequent itemsets. Experiments show that MW_Apriori algorithm avoids rescanning the database, making the cost of time and space significantly reduced, at the same time can effectively mine the hidden and valuable rare events.

Key words: association rule;MW_Apriori algorithm;transaction matrix;weighted support

作者简介:

边根庆 男,(1968-),副教授.硕士生导师,研究方向为信息管理技术.

王 月 (通讯作者) 女,(1993-),硕士.研究方向为信息安全技术.

E-mial:yuewang_711@163.com.