Abstract

There are times when frequent itemset which is generated by the Traditional Association Rule Mining are the items that are only often sold together, and do not generate substantial profits for the retailer. Therefore, the Traditional Association Rule Mining can be further developed into Utility Mining, which can digs high profitability itemset. In this final project, Two-Phase Algorithm is used to implement the Utility Mining.

On Utility Mining, each item is given two kind of weights, ie the item sold count in a transaction, and a profit for each item. Then the Two-Phase Algorithm 2 calculates the weight these 2 weights in 2 stages, to produce knowledge, which is itemsets which have high profitability and association value

In this study, there are two variables that affect the performance, the minimum utility threshold and minimum confidence threshold. Minimum threshold affects the number of number of knowledge generated and processing time. The smaller the minimum utility threshold, the number of knowledge generated more and more, and the longer the processing time, with the increase of accuracy. While the minimum confidence threshold also affects the number of knowledge generated and the accuracy. The number of knowledge are increasing with lowered minimum confidence threshold

Keywords: *Knowledge, Market Basket Analysis, Utility Mining, Two-Phase Algorithm*