Abstract

Prediction in shopping cart uses partial information about the contents of a shopping cart for the prediction of what else the customer is likely to buy. In order to reduce the rule mining cost, a fast algorithm generating frequent itemsets without generating candidate itemsets is proposed. The algorithm uses Boolean vector with relational AND operation to discover frequent
itemsets and generate the association rule. Association rules are used to identify relationships among a set of items in database. Initially Boolean Matrix is generated by transforming the database into Boolean values. The frequent itemsets are generated from the Boolean matrix. Then association rules are to generated from the already generated frequent itemsets. The association rules generated form the basis for prediction. The incoming itemset i.e the content of incoming shopping cart will also be represented by a Boolean vector and AND operation is performed with each transaction vector to generate the association rules. Finally the rules are combined to get the predictions. Dempster’s rule of combination (DRC) is used to combine the evidences. Finally the predicted items are suggested to the user.

Reference

- Apriori Algorithm Reference URL:
  http://www2.cs.uregina.ca/~dbd/cs831/notes/itemsets/itemset_prog1.html

Index Terms

Computer Science  Data Mining
Key words
Association Rule Mining, Boolean Vector, Prediction, Basic Belief Assignment, Demster Shafer Theory of Rule Combination.