

Knowledge Management for SCM

Ashwin Singh¹ Shraddha Singh²

^{1,2}Department of Information Technology Engineering
^{1,2}Thakur College of Engineering and Technology

Abstract---Knowledge Management for SCM has come into picture for the specific purpose of combining intelligent system with SCM. The Basic aim of using Knowledge Management System to help Organization to manage their supply chain in much efficient way. It will help organizations to greatly increased their revenue using knowledge management system with Supply chain Management .In This we are using Data Mining technology will allow, the extraction of hidden predictive information from large databases, is a important information in their data warehouses. Data mining tools predict future trends and behaviors, allowing businesses to make proactive, knowledge-driven decisions.

General Terms: MBA, Operation, Data Mining, ARM, SCM

Keywords: Knowledge Management System, Supply Chain Management, Market Basket Analysis

I. INTRODUCTION

In this project "Knowledge management for SCM" we are using Knowledge management system to manage supply chain of company. Supply chain management (SCM) is the management of the flow of goods. It includes the movement and storage of raw materials, work-in-process inventory, and finished goods from point of origin to point of consumption. Knowledge management (KM) comprises a range of strategies and practices used in an organization to identify, create, represent, distribute, and enable adoption of insights and experiences. Such insights and experiences comprise knowledge, either embodied in individuals or embedded in organizations as processes or practices. In this project knowledge management system will work together with SCM(Supply Chain Management System).

Using Knowledge management strategies we will create strategy for future demand of products, according to that organizations can manage their inventory, sales and finished goods from point of origin to point of consumption. We are using Data mining as a knowledge management Technique in our project which concentrate on hidden data and help in extracting information from organization supply chain point of view. Data mining (DM), also called Knowledge-Discovery in Databases (KDD) or Knowledge-Discovery and Data Mining, is the process of automatically searching large volumes of data for patterns using tools such as classification, association rule mining, clustering Data mining, the extraction of hidden predictive information from large databases, is a powerful new technology with great potential to help companies focus on the most important information in their data warehouses. Data mining tools predict future trends and behaviors, allowing businesses to make proactive, knowledge-driven decisions.

II. PROBLEM DEFINITION

To develop an efficient algorithm to find the desired information resources and their usage pattern and also to develop an algorithm for geographical data sets that reduces communication cost and communication overhead.

Purpose:

It has become increasingly necessary for users to utilize automated tools in find the desired information resources, and to track and analyze their usage patterns. Association rule mining is an active data mining research area. However, most ARM algorithms cater to a centralized environment. Association Rule Mining (D-ARM) algorithms have been developed. These algorithms, however, assume that the databases are either horizontally or vertically. In the special case of databases populated from information extracted from textual data, existing D-ARM algorithms cannot discover rules based on higher-order associations between items in textual documents that are neither vertically nor horizontally, but rather a hybrid of the two.

III. DEVELOPMENT IDEA

A. Using effective Data Mining Algorithm SCM Tool. [1]

This paper introduces how to use Data Mining algorithm as an analysis tool to predict the sales of product in Market. Use of Data mining algorithm efficient for Organization .This algorithm will extract appropriate information from database about product sales. Using which organization will manage their Inventory System.

B. Data Mining Market Basket Analysis Using Association Rules [2]

Market-Basket Analysis is a process to analyze the habits of buyers to find the relationship between different items in their market basket. The discovery of these relationships can help the merchant to develop a sales strategy by considering the items frequently purchased together by customers. In this research, the data mining with market basket analysis method is implemented, where it can analyze the buying habit of the customers. The testing is conducted in Minimarket X. Searching for frequent itemsets performed by Apriori algorithm to get the items that often appear in the database and the pair of items in one transaction. Pair of items that exceed the minimum support will be included into the frequent itemsets are selected. Frequent itemsets that exceed the minimum support will generate association rules after decoding. One frequent itemsets can generate association rules and find the confidence, which is uses a hybrid-dimension association rules. The test results show, the application can generate the information what kind of products are frequently bought in the same time by the customers according to Hybrid-dimension Association Rules

criteria. Results from the mining process show a correlation between the data (association rules) including the support and confidence that can be analyzed.

IV. DISCUSSION

Surveys are the bread and butter for getting feedback. They're easy to set up, easy to send out, easy to analyze, and scale very well. Analytics and data give us all sorts of insights into what our customers want from our business. When we match customer feedback to what we're seeing in our analytics, we get a much clearer picture of what's going on. Then we'll know how to fix problems and go after the right opportunities. We used short survey for our application to check whether people actually want Educational application or not and we got people is actually want this application to develop.[6]

V. FUTURE SCOPE

This Application can be extended with various contents such as Database Technology, Operating System, Networking,. The various features within the application like examination & learning also be extended in same way.

VI. RESULTS

Analyzing any survey, web or traditional, consists of a number of interrelated processes that are intended to Data mining (DM), also called Knowledge-Discovery in Databases (KDD) or Knowledge-Discovery and Data Mining, is the process of automatically searching large volumes of data for patterns using tools such as classification, association rule mining, clustering, etc..

Data mining is a complex topic and has links with multiple core fields such as computer science and adds value to rich seminal computational techniques from statistics, information retrieval, machine learning and pattern recognition.

Data mining techniques are the result of a long process of research and product development.

Data mining is ready for application in the business community because it is supported by three technologies that are now sufficiently mature: Massive data collection, Powerful Multiprocessor Computers, Data mining Algorithms

ACKNOWLEDGMENTS

We are foremost thankful to the Principal of our college Dr. B. K. Mishra who has taken a lot of efforts in providing us with excellent lab facilities. We are greatly indebted to our internal Project guide Prof. Aaditya Desai for his able guidance, which has helped us in better understanding our project work We would like to thank him for his helpful suggestions numerous discussions with which he has guided us.

REFERENCES

- [1] Yu-shui Geng, Jinan, China and Xin-wu Du, The Research of Data Mining Based Sales Forecast
- [2] Setiabudi, D. H., Budhi, G. S. Purnama, I. W. J. ; Noertjahyana, A Data mining market basket analysis'

using hybrid-dimension association rules, case study in Minimarket X

- [3] Xie Wen-xiu; QiHeng-nian; Huang Mei-li, Market Basket Analysis Based on Text Segmentation and Association Rule Mining
- [4] <http://www.computer.org>
- [5] <http://ieeexplore.ieee.org>
- [6] <http://www.wikipedia.org>