Consumer Behaviour Analysis Using Data Mining

Ms. Meenu Garg[1], Nishita Kamal[2], Rhea Singh[3]
[1, 2, 3] Dept of IT
[1, 2, 3] MAIT, Rohini, New Delhi, India

Abstract- *This paper reviews the use and need of additional tools for analyzing the pattern of behaviour shown by the consumers towards a particular product, shop, business or idea. It is achieved by the consumer behaviour models. Consumer behaviour models seek common behaviours among particular groups of customers in order to predict how a similar customer will behave under similar circumstances. This paper shows the problem of consumer relationship management (CRM) and how data mining tools are used to support the decision making.*

Keywords- Consumer, consumer behaviour analysis, consumer relationship management, data mining.

I. INTRODUCTION

A consumer behaviour model seeks hidden information using data mining techniques so as to collect the data based on which the behaviour of consumers can be understood.

1.1 Data mining

It is defined as a sophisticated data search capability that uses statistical algorithms to discover patterns and correlations in data. Data mining discovers patterns and

relationships hidden in data. It helps business analysts to generate hypotheses, but it does not validate the hypotheses. For example, as an automobile manufacturer, it is surprising to know that a man with children tends to buy a sports car rather than a man with no children. Hence, this pattern is valuable so that consumers' demands can be fulfilled accordingly. This is illustrated in figure 3.1.

1.2 Consumer Relationship Management

The way in which companies interact with their Customers has changed dramatically over the past few years. As a result, companies have found that they need to understand their Customers better, and to quickly respond to their wants and needs. This is illustrated in figure 1.1.

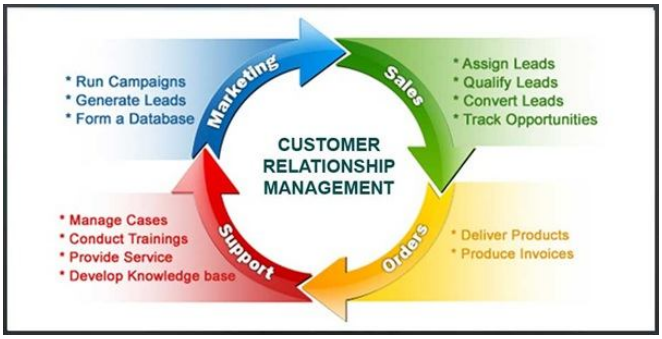

Figure 1.1

II. NEED FOR CONSUMER BEHAVIOUR ANALYSIS

1.3 About the problem

The problem is that without Consumer Behaviour Analysis the behaviour of the consumers cannot be known. The way in which companies interact with their Customers has changed dramatically over the past few years. A Customer's continuing business is no longer guaranteed. As a result, companies have found that they need to understand their Customers better, and to quickly respond to their wants and needs.

1.4 Challenges faced by the sellers

To succeed, companies must be proactive and anticipate what a Customer desires. It is no longer possible to wait until the signs of Customer dissatisfaction are obvious before action must be taken. Data mining techniques helps to overcome several obstacles in Customer relationships like-

1. The attention span of a Customer has decreased dramatically.
2. If you don't provide the special offer, your competitors will.
3. Streams of new product offerings. The number of products that are offered have risen significantly.
4. Your best customers also look good to your competitors. They will focus on small, profitable

III. PROCEDURE

As this project is based on data mining hence the main objective of the project is to gain as much hidden information as possible. Here hidden information means the data that is not visible during the execution of the process of trading between the merchants and the buyers.

1.5 Methodology

One of the approaches to analyse the customer behaviour can be using the following entities –

1. Page Hit Rate: A hit is a request to a web server for a file, like a web page, video, image, JavaScript, or Cascading Style Sheet. When a web page is downloaded from a server the number of "hits" or "page hits" is equal to the number of files requested. Therefore, one page load does not always equal one hit because often pages are made up of other images and other files which stack up the number of hits counted.
2. Page Exit Rate: Exit rate as a term used in web site traffic analysis is the percentage of visitors to a site who actively click away to a different site from a specific page, after possibly having visited any other pages on the site. The visitors just exited on that specific page.
3. Page Bounce Rate: Bounce is an Internet marketing term used in web traffic analysis. It represents the percentage of visitors who enter the site and then leave ("bounce") rather than continuing to view other pages within the same site. Bounce rate is a measure of the effectiveness of a website in encouraging visitors to continue with their visit.

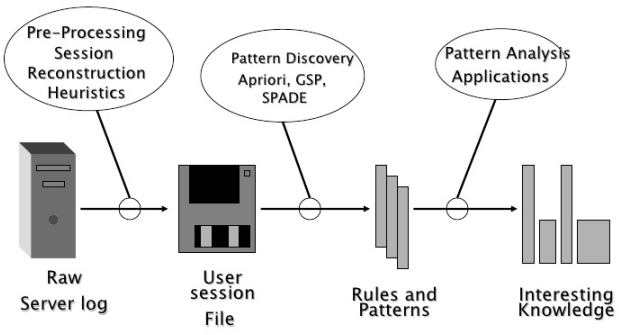

Figure 3.1

IV. FUTURE SCOPE

For the future of consumer behaviour we know that in today's globalized economy, competition is constantly increasing. Due to this, it has become more difficult for products and services from a particular company or agency to stand out. Especially when every market is moving to the internet for the growth of their business predicting the consumer behaviour is of utmost importance and hence the need of extra consumer analysis models would be on the increase. Also, additional features can be added to make the predictions more accurate.

V. CONCLUSION

Data mining is primarily used today by companies with a strong Customer focus - retail, financial, communication and marketing organizations. It is having lot of importance because of its huge applicability. It is being used increasingly in business applications for understanding and then predicting valuable data, like Customer buying actions and buying tendency, profiles of Customers, industry analysis, etc. The main goal of the paper is to highlight important issues to improve decision making to optimize your relationships with the customers and some of the approaches to solve them.

VI. ACKNOWLEDGMENT

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