



A Review on: Data Mining for Telecom Customer Churn Management

Dr. Mamta Madan
Professor at VIPS, GGSIPU
India

Dr. Meenu Dave
Professor at Jagannath University, Jaipur
India

Vani Kapoor Nijhawan
Assistant Professor at VIPS, GGSIPU
India

Abstract- Customer acquisition and retaining those customers is a matter of concern for all companies and the same applies for telecom sector too. So customer churn is an important area of concern. This research work aims at carrying out a literature review for the past decade reviewing around 50 research papers in the area of telecom churn with two perspectives: mining technique applied and publication year. Such a survey will be a help to the telecom service providers in determining the appropriate model to identify the prospective churners and accordingly framing the marketing strategies for different customer groups, to reduce the rate of customer turnover.

Keywords :- Churn Prediction, Data Mining Techniques, Decision Tree, Logistic Regression, Neural Network, Support Vector Machine.

I. INTRODUCTION

In the telecom industry, the biggest loss of revenue is happening because of increasing customer churns. Such customers who are not loyal to the company result in a financial burden on the company. This fact is very well known that the cost of finding new customers is far more than retaining the old ones. So, detecting the "going to be churner" customers beforehand is the objective of the telecom companies.

A. Data Mining

Data Mining can be defined as "the process of searching large stores of data to discover patterns, associations and trends to dig out useful structures from large amounts of data stored in different databases or other information repositories." [w1]

There are many organizations which are using data mining techniques for managing their customer relationships, including getting new customers, increasing revenue from existing customers, and retaining high valued and loyal customers.

B. Data Mining In Telecom

According to [1], data mining in the field of telecommunication can be used for the following purposes:

- Churn prediction: - The process of predicting the customers who are at a risk of leaving the company is known as churn prediction in telecommunication. These customers should be focused upon, and efforts should be made to retain them. This is very important because retaining a customer is less expensive than acquire a new one.
- Insolvency prediction: - Hike in the number of due bills are becoming an important area of concern for all telecom companies. In such a competitive environment, companies cannot bear the burden of insolvency. To find such insolvent customers, data mining technique can be used. Customers who will turn defaulters, can be predicted beforehand.
- Fraud Detection: - Fraud is an expensive affair for the telecom industry, so the companies should try to predict fraudulent users by identifying their usage patterns.



Fig.1 Research Methodology