Abstract

In any business with a subscriber based service model including industries like telecommunication or banking, it is highly probable that some customers leave one brand and switch to other competitor in quest of better services. This migration of customers affects the growth of these companies and hence it has become to keep customers in house an utmost importance than building a large customer base. The measure of switching or migration of individuals or items from one to another collective group is in its broadest sense known as "Churn" (also called "attrition") and such migrating customers or items are known as churners. Because of the impact churn can have on a company or brand's future, it is valuable to know which customers are likely to switch to a competitor in the near future.

Since acquiring new customers is more expensive than retaining existing customers, churn prevention can be regarded as a popular way of reducing the company's cost and increasing rate of profit. This study of customer's past service usage, service performance, spending and other behaviour patterns, the likelihood of whether a customer wants to terminate service and thus predicting the probable churners is known as churn analysis or churn prediction. In order to analyze customer data and predict churn various data mining models can be adopted. In this approach we have adopted various learning techniques such as linear regression, logistic regression models and neural networks to achieve our goal. This study uses a large dataset obtained from a telecommunication service provider which contains information on the customer's usages of the service, different parameters that directly or indirectly influence a customer's status change from active use (using the service on a regular basis) to non-use (deciding not to use it temporarily without having churned yet) and then suspended (being suspended by the service provider).

This study focuses on a comparative analysis of different learning algorithms that have been adopted to predict attrition in a given service model to figure out how well these learning models work or how close they fit with the data. At the end of the study, the results of this examination have been discussed in brief.