Telecom Churn Analysis – A Case Study

Introduction

Global Top Trends in technology and computing includes mobile technology

Landscape of Telecom Industry has changed

···. Large Number of Private Service Providers have evolved

···.To Survive in current Scenario new innovative business models are a must

Churn is huge factor in Telecom Industry

Major initiators of churn include

···. Quality of service

···. Tariffs

···.Dissatisfaction in post sales service etc.

Interesting facts surrounding churn

···. Annual churn rate is estimated to be 25-30% in Europe

···.Acquiring new customers is costlier than retaining them

Objective

Objective of the current study was to predict churn and identify the key drivers of churn in each business division using simulated customer data sets.

Data Preprocessing

- Null Value elimination

  ⋯.. Is Empty() fn present in matlab was used to identify null values and row associated with it was removed

 - Missing Value Elimination

  ⋯. Is NaN() fn present in matlab was used to identify missing values and row associated with it was removed

- Negative Value Elimination

  ⋯. Negative values cannot be part of the analysis being performed hence these values were identified and eliminated

Methodology

- Sanitized data stored in MYSQL database

- Matlab R2012b was used for the analysis

- Query Builder of Matlab package was used to query data

  ⋯. Specific join queries on delivery completed and billing table based on customer number and timestamp were used

- Neural networks, Naïve Bayesian, Decision Trees have been reported to be used for analyzing telecom churn

- Current study used Stats tool box - Multivariate logistic Regression on the data

Conclusion

- Quality of service could also a play major role even if the response /delivery state is on time

- Extraction of data using queries were time consuming

- Need to parallelize in order to make prediction faster

- Use of matlab production server is being explored

Thank you

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