CUSTOMER CHURN PREDICTION FOR SRI LANKAN BANKS

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Abstract

In a highly competitive market companies are constantly exploring novel methods to retain and increase their customer base to sustain a stable growth. The banking industry being a highly competitive market needs to retain the customers by providing exceptional customer service and other services to retain its customers. Retaining existing customers is known to be highly cost effective than obtaining new customers. Regardless of customer churn behavior being a globally tackled problem, the Sri Lankan banking industry has lagged in utilizing technological solutions to address the issue.

This project aims to analyze the existing problem of customer churn and design and develop and evaluate a churn prediction model which enables the identification of customers likely to churn and provide churn probabilities which enables the banking staff to prioritize and focus attention on key customers.

With the usage of data mining and machine learning approaches the solution was thoroughly analyzed to create a customer churn prediction solution. The literature survey was carried out to examine features, algorithms and methods used in existing systems and with the inclusion of industry experts in the banking field to gather requirements and test the process, a comprehensive feature list was obtained. The learning model trained with a sample dataset obtained containing 10,000 records with 13 features. Preprocessing tasks such as min max scaling and standard scaling was conducted, and the model was trained. The gradient boosting classifier obtained the highest accuracy level of 84%.

The created solution has been tested and evaluated by domain experts as well as technical experts to evaluate the solution and to ensure the solutions usability in its indented domain as well as to ensure the value of the application.