Intelligent Customer Retention: Using Machine Learning for Enhanced Prediction of Telecom Customer Churn

Define Problem / Problem Understanding

Literature Survey

Customer churn prevention is one of the deciding factors when it comes to maximizing the revenues of any organization. Also known as customer attrition, it occurs when customers stop using the products or services of a company. Through our paper, we are predicting customer churn beforehand so that proper customer retention steps can be taken with the help of exploratory data analysis and to make customized offers for the targets. For the churn prediction, our implementation consists of comparative analysis of four algorithmic models, namely logistic regression, random forest, SVM and XGBoost, on three different domains, namely banking, telecom and IT. The purpose of doing this comparative analysis is that there are not many research works which compare the performance of various algorithms in different domains. We also develop various retention strategies with the help of exploratory data analysis.

In banks as the data is increasing daily due to digitization in the banking sector, people want to apply for loans through the internet. Machine Learning (ML), as a typical method for information investigation, has gotten more consideration increasingly. Individuals of various businesses are utilising ML calculations to take care of the issues dependent on their industry information.
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In recent era, major companies from e-commerce sector should focus on customer identification through churns in accordance to their business strategy as the market saturation increases. Several e-commerce professionals and industrialists highlighted /enlisted/specified that identifying churn customers whose subscription period is about to end or those likely to migrate services from pre-existing company to another is known/represented as customer attrition. In order to retain loyal customers, earlier prediction of client behavior plays a vital part in real-time marketing. In this survey work, the difficulties in the prediction of customer attrition in the motor insurance sector are represented along with various data mining techniques comprising deep learning and machine learning advancements. It also emphasizes on the churns within the customer management cycle with surroundings. An overview of the survey performed orderly provides construction of churn prediction model, various methods of prediction utilized and their application in the business sector.