

Customer Churn Prediction using Machine Learning

Abstract

This project leverages machine learning to predict customer churn by analyzing user behavior, transaction history, and engagement levels, enabling businesses to develop retention strategies and improve customer satisfaction.

Businesses must compete fiercely to win over new consumers from suppliers. Since it directly affects a company's revenue, client retention is a hot topic for analysis, and early detection of client churn enables businesses to take proactive measures to keep customers. As a result, all firms could practice a variety of approaches to identify their clients early on through client retention initiatives. Consequently, this study aims to advise on the optimum machine-learning strategy for early client churn prediction. The data included in this investigation includes all customer data going back about nine months before the churn. The goal is to predict existing customers' responses to keep them. The study has tested algorithms like stochastic gradient booster, random forest, logistics regression, and k-nearest neighbors methods.