# 6BUIS020C – Final Project Report

## Telebond

Customer Churn Prediction for Telecommunication Industry in Sri Lanka

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# Abstract

Customer churn is a growing concern for Sri Lanka's telecommunications industry, leading to lost revenue and higher costs to attract new customers. Many existing churn prediction systems fall short when it comes to offering industry-specific insights or timely action. This project introduces a machine learning-powered solution that helps telecom providers identify customers who are likely to leave, giving them a chance to respond early and improve retention.

The system is built using real historical customer data, including billing history, service usage patterns, and interactions with customer support. Algorithms such as decision trees, logistic regression, and random forests are used to clean and analyze the data. The most effective model is chosen based on how accurate and easy to understand it is. Instead of tracking users in real time, the system works in batches by processing collected data at intervals.

Results show that the model can accurately spot customers who are at risk of leaving due to late payments, reduced usage, or frequent complaints. It's also scalable, making it suitable for telecom companies looking for long-term insights. By learning from past behavior, the system helps businesses create focused strategies to keep their customers and reduce churn.