Project Proposal

Title: Customer Churn Analysis for a Telecom Company

Introduction:

In the competitive landscape of the telecommunications industry, managing customer retention is vital for sustaining business growth and profitability. Customer churn, or the loss of clients, presents a challenge that can significantly impact revenue and market position. Understanding the underlying factors contributing to customer churn enables telecom companies to implement effective strategies to retain customers and optimize service offerings. This project aims to analyze customer churn data using business intelligence techniques to uncover insights that can inform targeted retention strategies.

Problem Statement:

The objective of this project is to predict customer churn and identify key factors contributing to churn within a telecom company and generate visualizations in R, to digest data easily. We will analyze customer data to:

- Predict the likelihood of customer churn.
- Identify the most significant factors associated with churn.
- Provide actionable recommendations for reducing churn and improving customer retention.

Dataset Description:

The dataset used for this analysis is the Telecom Customer Churn Dataset. It contains information on customer behavior, service usage, and charges. The dataset has 3334 entries and 11 columns, which are:

1. **Churn**: Indicates whether the customer has churned (1) or not (0).
2. **AccountWeeks:** Number of weeks the customer has been with the service.
3. **ContractRenewal:** Whether the customer has renewed their contract (1) or not (0).
4. **DataPlan:** Whether the customer has a data plan (1) or not (0).
5. **DataUsage:** Amount of data the customer has used.
6. **CustServCalls:** Number of customer service calls made by the customer.
7. **DayMins:** Total minutes of calls made during the day.
8. **DayCalls:** Number of calls made during the day.
9. **MonthlyCharge:** Monthly charge for the customer's service.
10. **OverageFee:** Fee charged for exceeding the allocated usage.
11. **RoamMins:** Total minutes of calls made while roaming.

We will be using second – hand data: **Customer Churn Analysis for a Telecom Company**
Dataset Link: https://www.kaggle.com/datasets/barun2104/telecom-churn?resource=download
Source of Dataset: Kaggle

Potential BI Insights:

1. Analyze overall churn rates and observe trends over time.
2. Segment customers based on their likelihood of churning and analyze demographic or usage patterns.
3. Identify which features (e.g., MonthlyCharge, DataUsage) most significantly impact churn.
4. Explore how usage patterns (e.g., DayMins, CustServCalls) correlate with churn.
5. Assess the impact of customer service interactions and contract features on churn.
6. Estimate revenue loss from churn and potential costs for retention strategies.
7. Develop targeted retention strategies based on high-risk customer segments and key churn factors.

Group Members

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