Telecom Churn Case Study

Submitted By :

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- ## Objective:

To present a comprehensive strategy for reducing customer churn in the telecom industry by leveraging predictive analytics to identify high-risk customers, thereby prioritizing retention efforts and enhancing profitability.

- ## Key Points:
  - **Context:** Highlight the competitive nature of the telecom market and the high churn rates.
  - **Importance of Retention:** Emphasize the cost difference between acquiring new customers and retaining existing ones.
  - **Business Goal:** Focus on the primary objective of retaining highly profitable customers.
  - **Solution Approach:** Propose using predictive analytics to forecast churn and target retention efforts effectively.

Agenda:

- Business Problem Overview
- Data Analysis Summary & Key Findings
- Recommendations & Business Implications

Business Problem Overview

- **Industry Dynamics:**
  - High annual churn rates (15-25%) due to intense competition.
  - High cost of customer acquisition (5-10 times more than retention).
- **Objective:**
  - Predict churn risk and identify indicators for proactive retention.
- **Market Focus:**
  - Emphasis on prepaid markets, especially in India and Southeast Asia.

Data Analysis Summary & Key Findings

- **Data Overview:**
  - Types of data collected (e.g., customer demographics, usage patterns).
  - Explanation of key variables (e.g., call usage, SMS usage, data usage).
- **Churning Definition :**
  - Churning customers are identified based on activity in the fourth month, with churn labeled as 1, and otherwise as 0.
  - Customers who have not made any calls or used mobile internet even once are considered to be in the churn phase.

The churn rate, indicating customers who have discontinued services, stands at **approximately 8%,** while the non-churn rate, representing customers who continue their subscriptions, is close **to 92%.**

This data demonstrates an imbalance between churned and non-churned customers.

Recommendations & Business Implications

- **Major Key Findings**
  - An increase in the average revenue per user in month 6 suggests that dissatisfied users are more prone to churn.
  - Users whose minutes of usage are more in month 6 are more likely to churn.
  - Users exhibiting a significant disparity in call duration to other networks between month 6 and month 7 are prone to churn.
  - Users are more likely to churn when there is a greater disparity in the total recharge amount.
  - The absence of 2G recharge activity does not provide conclusive evidence regarding churn behavior; the data does not offer clear indications.
  - In month 8, users with night packs, whose usage status is uncertain, exhibit a high churn rate of approximately 14%.
  - Among users engaging with Facebook in month 8, the churn rate is approximately 2%.
  - Users not utilizing Facebook experience a churn rate of close to 7% in month 8.
  - The average recharge amount for months 6, 7, and 8 is missing in the dataset, so there is a higher likelihood of churn among these users.

Recommendations & Business Implications

- **Major Key Findings**
  - Users with minimal local outgoing minutes are more prone to churn.
  - Users are more likely to churn if there is a significant disparity in total outgoing minute usage between month 6 and month 7.
  - Users are more inclined to churn if their local outgoing minutes within the same operator are lower in months 6, 7, and 8.
  - A reduced amount of local outgoing minutes to other operators indicates a higher likelihood of churn.
  - A lower median Age of network suggests a higher likelihood of churn.
  - Users who engage in a higher volume of STD calls are at a greater risk of churning.
  - A higher volume of incoming roaming minutes correlates with a higher likelihood of churning.
  - Users are more prone to churn when there is an increase in outgoing roaming minutes.