**INTRODUCTION**

BACKGROUND :-The company operates in California and serves 7,043 customers, offering phone and internet services. The dataset covers one quarter of 2022, containing information on customer demographics, location, services, and current status. However, data quality issues such as duplicates, outliers, and missing values need to be addressed before conducting analysis.

PROBLEM :- The Telecommunications company has been experiencing customer churn, impacting its revenue and growth potential. To address this issue effectively, it's essential to understand the reasons behind churn, customer demographics, and preferences. Additionally, improving data quality and conducting thorough analysis can provide insights into retaining existing customers and attracting new ones.

**SOLUTION**

Through comprehensive data analysis, this report offers data-driven insights into telecom customer churn for a fictional telecommunications company. By engaging stakeholders with these insights, the company can develop targeted strategies to address churn and improve customer retention

* **Data Analysis**: Evaluate customer demographics, location, services, and current status to identify patterns related to churn. Key areas include customer acquisition, gender, age group, city distribution, internet service usage, revenue, data consumption, and streaming service preferences.
* **Data-Driven Insights**: Extract actionable insights on churn drivers, customer profiles (churned, joined, stayed), preferred payment methods, and effective churn offers from the analysis. These insights guide strategic decisions and retention strategies.
* **Stakeholder Engagement**: Engage stakeholders—management, marketing teams, and customer service—by presenting clear data insights. This facilitates collaboration, ensuring alignment on objectives and effective implementation of churn reduction strategies.

**PROJECT SCOPE**

**Goal:** Reduce telecom customer churn for a fictional telecommunications company through data analysis and targeted strategies.

**Step-by-Step Process:**

1. **Data Collection and Preparation**
   * Collect Q2-2022 churn data.
   * Ensure data completeness and accuracy for analysis.
2. **Data Analysis**
   * Analyse customer demographics, location, services, and churn patterns.
   * Explore marketing domains (Product, Price, Promotion, Place, People) to enhance departmental alignment.
   * Derive insights on churn drivers and customer profiles (churned, joined, stayed).
3. **Stakeholder Engagement**
   * Identify stakeholders: management, marketing, customer service.
   * Present insights clearly to align on churn reduction strategies.
4. **Strategy Development**
   * Develop targeted strategies based on insights.
   * Focus on optimizing marketing domains for smoother operations.
5. **Implementation and Monitoring**
   * Implement strategies across product, pricing, promotions, distribution, and service.
   * Monitor and adjust strategies based on effectiveness.
6. **Evaluation and Reporting**
   * Evaluate impact on churn reduction and customer satisfaction.
   * Prepare detailed report on findings, actions, and outcomes.
   * Highlight stakeholder roles in addressing churn.

**Stakeholders:**

1. **Management:** Decision-makers for resource allocation.
2. **Marketing Teams:** Develop and execute retention strategies.
3. **Customer Service Representatives:** Improve satisfaction and resolve issues.
4. **Sales Teams:** Support pricing and promotion strategies.
5. **Product Development Teams:** Enhance offerings to meet customer needs effectively.

**METHODOLOGY**

**Data Sources:**

* Obtained data from Kaggle in CSV format.
* Imported data into Excel for analysis.

**Data Wrangling:**

* Addressed apparent null values caused by customers not using certain services (e.g., no internet = no streaming).
* Replaced these "null" instances with which fits better to accurately reflect the data's nature.

**Data Analysis:**

* Utilized Excel for comprehensive analysis of churn data.
* Explored customer demographics, service usage, and other variables to uncover insights into churn behavior.

**Finding Trends and Patterns:**

* Conducted in-depth examination of churn data to identify significant trends and patterns.
* Aimed to discover recurring themes and anomalies that inform effective churn reduction strategies.

**Data Visualization:**

* Leveraged Excel's charting and graphing tools to visually present insights from churn analysis.
* Created charts, graphs, and pivot tables to make complex information clear and actionable for stakeholders.

**GOALS AND KPI’S**

**Goals:**

1. Ensure Data Accuracy.
2. Understand Customer Preferences.
3. Identify Churn Drivers.
4. Develop Retention Strategies.

**KPIs (Key Performance Indicators):**

1. Data Quality Score.
2. Churn Rate.
3. Retention Rate.
4. Customer Satisfaction Score.

**TECHNICAL PROCESSES**

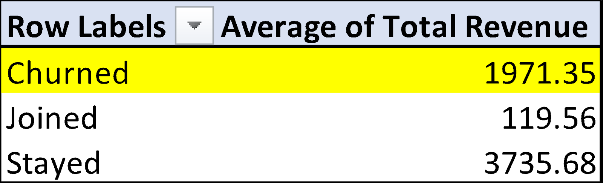
* Pivot Tables
* Imputation
* Power Query
* Data Visualization

**BUSINESS CONCEPTS USED**

* **Market Understanding:** Analysing customer demographics, behavior, and churn patterns provides insights into the telecom market landscape. This understanding helps tailor strategies to meet customer needs effectively.
* **Customer Demographic Analysis:** Segmenting the customer base based on demographics like age, gender, and location enables targeted marketing strategies. This approach ensures personalized engagement tailored to diverse customer preferences.
* **Customer Behaviour Analysis:** Examining service usage and churn patterns reveals why customers leave or stay. Insights into these behaviours help identify churn drivers and develop effective retention strategies.
* **Customer Retention:** Strategies aimed at retaining customers and increasing loyalty involve personalized promotions and improved customer service based on data-driven insights. These efforts maximize customer lifetime value.
* **New Customer Acquisition:** Attracting and acquiring new customers involves leveraging market trends and preferences to design impactful marketing campaigns. This approach drives growth and expands market reach effectively.

**RECOMMENDED ANALYSIS**

1. **Is the company loosing high value customers ? If so , how can they retain them ?**



***Through comparison of average revenue generated from churned , joined and stayed customers we come to know that “YES” We Are Loosing High Value Customers.***

***The churned customers average Of total revenue was $ 1971.35 which is more than joined customers and almost half of the stayed customers depicting us that we are loosing high value customers in the form of churned***

**CONCLUSION**

The telecom customer churn analysis for a California-based telecommunications company in Q2 2022 involved examining a dataset of 7,043 customers to understand demographics, service preferences, and behaviours. By improving data quality through addressing duplicates, outliers, and missing values, insights were gained into customer distribution by gender, age groups, and cities, alongside patterns in internet service usage, average revenue, and GB consumption. Understanding customer profiles across churned, joined, and stayed categories revealed key drivers of churn, informing targeted retention strategies. Analysis of customer statuses highlighted distribution among churned, stayed, and joined groups, guiding efforts to enhance customer satisfaction through tailored retention initiatives and strategic service improvements.

NAME :- **Ketki Jain**

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