Decoding Telecom Churn: An Analytical Project for Strategic Retention

This project aimed to unravel the complexities of customer churn in the telecom sector. By analyzing customer demographics and service behaviour, I identified key patterns and factors influencing customer attrition, providing a clear roadmap for retention strategies.

Project Approach: From Data to Insight

Key Activities

- Performed **Exploratory Data Analysis (EDA)** on customer data.
- Identified key churn drivers: **senior citizen status**, **contract type**, **tenure**, and **monthly charges**.
- Visualised trends using Python libraries like **Seaborn** and **Matplotlib**.

Tools & Technologies

- **Python (Pandas, Matplotlib, Seaborn)** for data handling and visualisation.
- A real-world **telecom dataset** with customer profiles, service details, and churn labels.
- Analytical thinking to extract insights and suggest data-driven business actions.

Unpacking Churn: Initial Insights

1

Churn Rate Distribution

A significant portion of customers have churned, indicating potential dissatisfaction or competitive offers.

2

Tenure vs. Churn

Customers with **shorter tenure (new users)** are more likely to churn compared to long-term users.

3

Senior Citizens Churn More

Senior citizens show a higher churn rate, suggesting a need for better onboarding, tech support, or pricing for older users.

4

Contract Type Effect

Month-to-month customers churn far more than those on **1- or 2-year contracts**, highlighting the importance of long-term plans.

5

Monthly Charges Impact

Customers paying **higher monthly charges** are more prone to churn — pricing strategy could be a key lever for retention.

Deeper Dive into Churn Drivers

1

Paperless Billing

Users tend to churn more, possibly due to lack of personalised support or transparency issues.

2

Lack of Add-on Services

Customers **not using add-ons** like Online Security, Online Backup, or Tech Support churn more, indicating "sticky" features.

3

Fiber Optic Users

Fiber optic users show higher churn compared to DSL, possibly due to performance expectations or pricing.

4

Streaming Services

Users with **Streaming TV or Movies** still churn significantly, indicating entertainment features alone don’t ensure loyalty.

5

No Internet Users

Customers without internet service show the **lowest churn**, likely due to simpler service needs or basic landline retention.

6

Multiple Lines

Having **multiple phone lines** doesn’t prevent churn — both single and multiple line users show high churn rates.

Strategic Recommendations (Part 1)

Senior Citizen Retention

Introduce senior-specific plans with simplified features, enhanced customer service, and loyalty rewards to retain this segment.

Contract Commitment

Promote long-term contract incentives like discounts, exclusive services, or bundled offers to encourage commitment.

Upsell Add-ons

Upsell tech add-ons (online backup, security) with free trials or bundles to improve product stickiness and perceived value.

Payment Method Optimisation

Offer cashback or convenience benefits for switching to auto-pay, credit/debit cards, or digital wallets.

Strategic Recommendations (Part 2)

Early Tenure Engagement

Strengthen onboarding and implement 90-day engagement plans (e.g., check-ins, personalised support) for newer customers.

Fiber Service Quality

Conduct quality checks on fiber service delivery and introduce satisfaction guarantees or support escalations to address issues.

Solo User Loyalty

Create targeted individual loyalty programs or referral discounts to drive engagement for customers without dependents or partners.