

CUSTOMER CHURN ANALYSIS

Objective

To analyze telecom customer data to uncover patterns and drivers behind customer churn. The aim is to assist the business in **increasing retention**, improving **customer satisfaction**, and reducing **revenue loss** by targeting high-risk segments.

Key Insights

#Churn Rate

- Overall churn rate is **26.54%**, indicating that 1 in 4 customers are leaving.
- 1. **Tenure**
 - Customers with **1–2 months tenure** have the **highest churn** (>50%).
 - Those with tenure above **60 months** have churn close to **5%**, showing higher satisfaction or loyalty.
- 2. **Contract Type**
 - **Month-to-month** contracts have a churn rate of **43.6%**.
 - Churn drops to **11%** for **one-year contracts** and just **3.7%** for **two-year contracts**.
- 3. **Payment Method**
 - **Electronic check** users show **45.7%** churn.
 - Users on **automatic payments** (credit card, bank transfer) have **<15%** churn.
- 4. **Internet Service**
 - **Fiber optic** customers churn more than **DSL** customers (Fiber makes up **58% of churned users**).
- 5. **Optional Services**
 - Churn is higher among users **not subscribed** to:
 - OnlineSecurity
 - TechSupport
 - DeviceProtection
 - OnlineBackup
 - These services show **strong correlation with retention**.
- 6. **Demographics**
 - **Senior citizens**: 41.9% churn rate.
 - Non-senior users: 23.2% churn rate.
- 7. **Family Ties**
 - Customers **without a partner**: 37% churn.
 - Customers **without dependents**: 34% churn.
 - Suggests family commitments enhance loyalty.

Recommendations

1. Encourage Long-Term Contracts

- Incentivize customers to switch from **month-to-month** to **annual or bi-annual plans** using discounts, loyalty benefits, or bundled offers.
- This can significantly reduce churn, as seen by the drop from **43.6% to 3.7%**.

2. Promote Optional Services

- Use **targeted marketing** to promote value-added services like OnlineSecurity , TechSupport, etc.
- Consider **free trials** or **first-month free** campaigns to increase adoption.

3. Simplify and Reward Autopay Options

- Encourage **automatic payment setup** with small discounts or loyalty points.
- This can reduce churn from 45% to below 15% based on current trends.

4. Retention Campaign for New Users

- Create a **30–60 day check-in strategy** (email/phone) for **new customers** to understand issues early and offer help—this is the highest churn window.

5. Targeted Engagement for Senior Citizens

- Offer **personalized plans, tech support**, or even phone-based customer care for seniors.
- Help them feel confident and supported with the services.

6. Use Family-Oriented Messaging

- Use advertisements that reflect how services support families or protect dependents.
- Show how **bundled accounts** for family members can add convenience and security.

Tools & Techniques Used

- **Python Libraries:** Pandas, Seaborn, Matplotlib
- **Exploratory Data Analysis (EDA):** Groupby, Pie Charts, Countplots, Histograms, Subplots
- **Platform:** Jupyter Notebook.