

Project Summary: Customer Churn Analysis

This project investigates why telecom customers leave the service by analyzing behavioral and subscription data from the **Telco Customer Churn dataset**. The key objective is to uncover patterns and variables that influence customer churn and to provide data-driven recommendations for reducing it.

Key Insights & Statistics

General Stats

- **Total Customers:** 7,043
 - **Churned Customers:** 1,869
 - **Overall Churn Rate:** 26.54%
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Churn by Senior Citizen Status

- **Senior Citizens (41.7%)** are more likely to churn than non-seniors (24.2%).
 - This shows that **age-sensitive services** or support could be missing.
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Churn by Gender

- Male and female churn rates are nearly equal (~26–27%).
 - Gender is not a strong differentiator in churn behavior.
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Churn by Internet Service

- **Fiber Optic users** show **churn rates above 40%**, much higher than DSL or No Internet.
 - Indicates possible dissatisfaction with Fiber services (e.g., reliability, speed, price).
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Churn by Contract Type

- **Month-to-month** customers have the **highest churn rate (43–45%)**.
 - In contrast, customers with **1-year or 2-year contracts** are more stable.
 - Suggests that **longer-term plans lead to better retention**.
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Churn by Value-Added Services

- Customers **without**:
 - **OnlineSecurity**
 - **TechSupport**
 - **DeviceProtection**
have **higher churn**.
 - These services appear to **increase customer stickiness**.
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Phone & Streaming Services

- Phone service alone doesn't predict churn well.
 - Customers with streaming services (TV/movies) churn less, suggesting **engagement content** may improve retention.
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Recommendations

1. Incentivize Longer Contracts

- High churn among **month-to-month** users.
- Offer discounts, bonuses, or loyalty rewards for switching to **annual plans**.

2. Target Senior Citizens

- Build dedicated customer service, educational resources, or easy-access plans for senior users.

3. Improve Fiber Optic Experience

- Investigate **technical complaints**, **price sensitivity**, and **support issues** linked to Fiber Optic users.

4. Bundle Value-Added Services

- Encourage adoption of **Online Security**, **Tech Support**, and **Streaming Bundles** via promotions.
- These services correlate with **lower churn rates**.

5. Proactive Retention Campaigns

- Use predictive models to **flag high-risk customers** based on patterns (e.g., no streaming, short contracts, senior).
- Reach out with personalized offers before they leave.