# Telecom Customer Churn Analysis Identifying Revenue Risk & Strategic Retention Opportunities

## Dataset Summary

This project is based on a fictional telecom dataset of **7,043 customers in California**, including details on demographics, services, billing, and churn status.

The goal: Analyze churn behavior, identify revenue risk, and recommend actionable retention strategies.

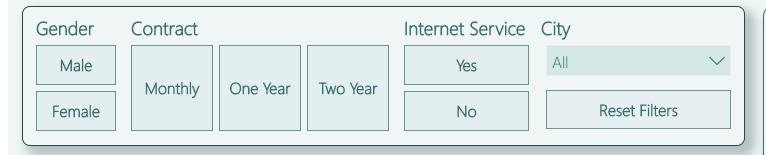
★ Tools: Power BI, DAX, Power Query

Created by: Pratiyush Kumar

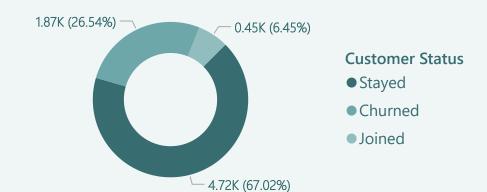
July 2025

## Executive Summary – Churn & Revenue Snapshot

Churn Demographics →







**■ Total Customers** 

Total Revenue

Churn Rate %

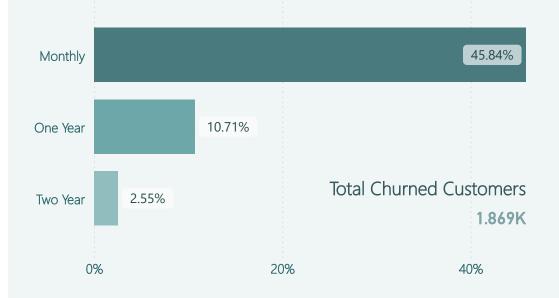
7K

\$21.37M 26.54%

\$3.68M

Revenue Lost to Churn

Which Contract Types Are Losing Customers?



As of Q2 2022, the churn rate stands at 26.5%, with over 3.6 million in revenue lost. Customers on monthly contracts and with short tenures are the most likely to churn.

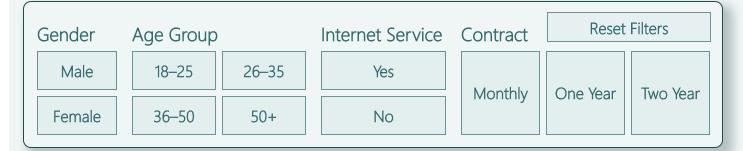
#### Churn Risk by Customer Tenure





# Who's Churning? Demographic & Payment Patterns

Churn Drivers →



Highest Churn Age Group

Customer Status 

Churned 

Joined 

Stayed

50+

Avg Monthly Spend (Churned)

\$73.35

Mailed Check

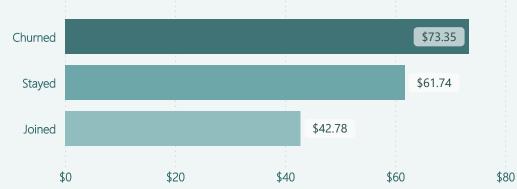
im Highest Churn Risk

(Payment)

#### **Less Customer Age Demographics vs Churn**

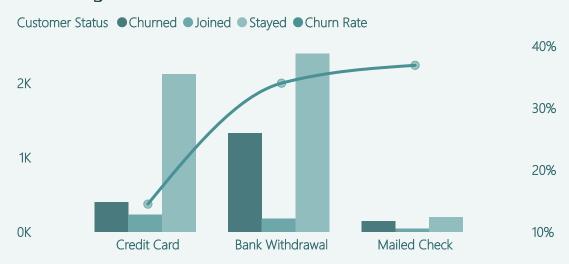
1857 915 50 +462 1349 36-50 302 853 26-35 661 18-25 190 500 1,000 1,500 2,000 2,500 3,000 0





**Insights:** High-paying, older customers are churning at greater volume — especially those using manual payment methods like Mailed Check, signaling a need for digital billing incentives.

#### **a** Billing Method Breakdown & Churn Trends





## What's Driving Churn? Services, Internet Plans & Offers

Revenue Risk →

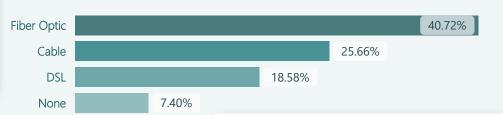


Customer Status 

Churned 

Stayed

#### Internet Plan Type vs Churn Rate



#### Churn Risk by Number of Services Subscribed



#### Primary Churn Triggers



Customers with fewer than 3 services or using Fiber Optic internet show the highest churn risk. Support-related add-ons like Security & Tech Support are underutilized by churned users. Competitor-driven exits dominate, while offers like A & B show promise in retention strategy.

182

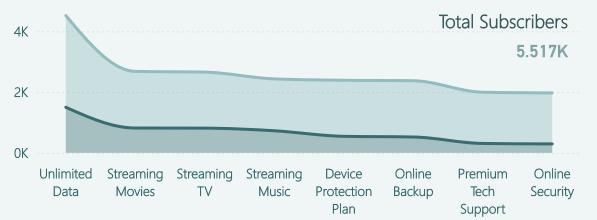
Other

211

Price









314

Attitude



# High-Value Churn: Revenue Impact & Strategic Risk

Key Findings →

#### **Q** Key Insight:

Although just 25% of customers contribute the majority of revenue, they account for **over 50% of total churn revenue**. Many of these high-spending churners were **loyal long-term customers** (60+ months) with **One- or Two-Year contracts** — a clear signal that churn isn't just a short-tenure issue.

#### **Risk Pattern:**

The **highest churn rates** are seen in customers generating **less than \$1K in total revenue**, but the **real financial impact** comes from the **top revenue tier (\$8K+)**, where even a small churn rate leads to significant losses.

High-Value Churn Impact

**Total Churn Revenue** 

Percent of Churn Revenue from Top 25% Spenders

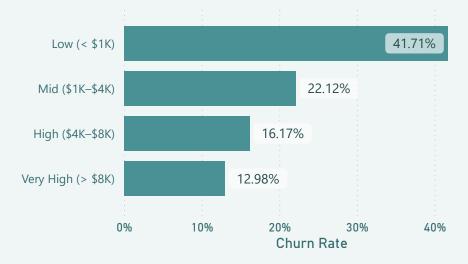
\$3.68M

50.22%





### **III** Which Revenue Segments Are Most at Risk?



#### Top 10 High-Revenue Churned Customers

| Customer ID | Total Revenue ▼ | Monthly Charge | Tenure (in Months) | Contract Type |
|-------------|-----------------|----------------|--------------------|---------------|
| 2889-FPWRM  | \$11,195.44     | \$117.80       | 72                 | One Year      |
| 3259-FDWOY  | \$11,084.84     | \$106.00       | 71                 | Two Year      |
| 2834-JRTUA  | \$11,040.97     | \$108.05       | 71                 | Two Year      |
| 1984-FCOWB  | \$10,756.15     | \$109.50       | 70                 | One Year      |
| 5287-QWLKY  | \$10,718.96     | \$105.10       | 71                 | Monthly       |
| 9835-ZIITK  | \$10,717.17     | \$110.85       | 66                 | One Year      |
| 5440-FLBQG  | \$10,690.92     | \$108.40       | 69                 | Two Year      |
| 9090-SGQXL  | \$10,507.21     | \$105.30       | 68                 | Monthly       |
| 0979-PHULV  | \$10,374.80     | \$99.45        | 69                 | Monthly       |
| 3886-CERTZ  | \$10,351.16     | \$109.25       | 72                 | One Year      |



## **Key Findings & Retention Strategy**

## Key Insights

- Customer churn sits at 26.5%, with over \$3.6M in revenue lost, heavily driven by short-tenure, monthly contract users.
- Over 50% of lost revenue comes from just 25% of customers many of them long-tenured, high spenders, proving churn is not just an early lifecycle issue.
- Competitors are the leading churn trigger, cited more than all other reasons combined mainly for better pricing, download speed, or data offers.
- Customers with **fewer than 3 services**, or those using **fiber optic plans**, exhibit significantly **higher churn risk**.
- Add-ons like Security, Tech Support, and Protection Plans are underutilized by churned users, pointing to missed retention opportunities.

Dataset Source: IBM Cognos Analytics via Maven Analytics
Structure: 39 fields | 2 tables | CSV | Public domain

Want to explore the data? [Dataset link]

#### Recommended Actions

- **© Launch retention offers** for high-value, long-tenure users especially those on month-to-month plans.
- **Promote add-on services** (support, protection) as loyalty perks during early tenure phases.
- Incentivize digital billing adoption to reduce churn from manual payers.
- Audit fiber optic segment to explore service quality or pricing issues.
- **Personalize outreach** to older customers with simplified plans or concierge support.

This dashboard was built to support proactive retention strategies and reduce revenue leakage in the telecom space by identifying who's at risk — and what we can do about it.

Made with ♥ by Pratiyush

Let's Connect

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