Customer Churn Analysis Report

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Executive Summary

In an age where customer experience is the new battleground for telecom companies, understanding why customers leave is as important as attracting them. This analysis, conducted on a real-world customer dataset, dives into patterns behind churn and brings forward the story the data tells with actionable insights for business leaders.

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1. Data Preparation

Dataset Overview:

- Total Records: 7,043 customers
- Features: Customer demographics, service subscriptions, payment methods, and contract details

Cleaning Steps:

- Converted TotalCharges to numeric format
- Dropped null records (~0.15% of data)
- Removed customerID, tenure columns
- Binned tenure into 6-month intervals for clarity

2. Churn Overview

- Total Churned Customers: **1,869**
- Total Retained Customers: **5,163**
- **Churn Rate:** ~26.6%

Insight: More than one in four customers are leaving the service, indicating significant retention challenges.

3. Key Findings from Exploratory Data Analysis

- <u>Demographic Drivers of Churn</u>

Feature	Churn Behavior
Senior Citizens	Churned at 41.3%, vs 24.8% for non-seniors.
No Partner	32.1% churn rate, compared to 19.3% with partner.
No Dependents	31.1% churned, vs only 15.6% with dependents.
Gender	Near equal: Male 26.1%, Female 27.1%.

Insight: Customers without family support and seniors are significantly more likely to churn.

- <u>Contract Type & Payment Method</u>

Contract Type	Churn Rate
Month-to-Month	43.9%
One Year	11.0%
Two Years	2.8%

<u>Payment Method</u>	<u>Churn Rate</u>
Electronic Check	45.3%
Mailed Check	19.2%

Bank Transfer (Auto) 16.7%

Credit Card (Auto)   15.3%

Insight: Long-term contracts and automated payments are linked to better customer retention.

- **Digital Services**

Service Type	Churn Rate (No vs Yes)
Streaming Movies	30.4% vs 26.3%
Streaming TV	30.1% vs 26.1%
Online Security	41.1% vs 15.2%
Online Backup	36.4% vs 21.5%
Tech Support	40.2% vs 15.5%
Fibre Optic Internet	41.5%

Insight: Customers without value-added services (security, support, etc.) are at higher risk of churn.

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4. Behavioral Insights

- Customers with monthly contracts and manual billing experience higher churn.
- Senior citizens are more likely to churn**.**
- Lack of digital support (e.g., tech support, online security) strongly correlates with churn.

Interpretation: Churn is largely driven by service experience, billing friction, and lack of long-term engagement.

5. Strategic Recommendations

1. Digital services (e.g., Online Security, Streaming) to improve service value.
2. Offer incentives for long-term contracts (e.g., discounts, loyalty points).
3. Promote auto-payment options to reduce churn from billing friction.
4. Target vulnerable groups (e.g., senior citizens, monthly plan users) with personalized retention strategies.
5. Monitor fibre optic service quality to address dissatisfaction among premium customers.

6. Business Impact Estimate

By reducing churn by just **10%**, the company could potentially retain over **700 additional customers** annually. Assuming an average customer lifetime value of INR 10,000, this could translate to **over INR 70 lakhs in retained revenue**.

Conclusion

This analysis reveals that churn is not random—it is a response to poor engagement and unmet expectations. Focusing on bundling, automation, and retention campaigns for high-risk groups can significantly reduce churn and drive long-term profitability.

End of Report