

Summary: Telecom Customer Churn Analysis

This analysis explores key factors influencing customer churn in a telecom company using data visualization, statistical insights, and trend identification. The study aims to highlight the primary reasons behind customer churn and provide actionable recommendations for improving customer retention.

1. Churn Distribution Overview

- **Overall Churn Rate:** Around **26%** of customers have churned, as visualized in the pie chart.
 - The count plot confirms that the majority of customers (74%) are retained, but the churn percentage is still significant, indicating the need for improved customer engagement strategies.
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2. Demographic & Service-Based Churn Insights

Customer Demographics & Churn Behavior

- **Senior Citizens Churn Rate:** Customers classified as senior citizens have a **higher churn rate (~42%)** compared to non-senior citizens (~23%).
- This suggests that older customers may face challenges with pricing, service usability, or support options.

Internet Service Impact on Churn

- **Fiber Optic Internet Users:** The churn rate is significantly higher (~31%) for fiber optic users compared to DSL users (~15%).
- This suggests that fiber optic users may face higher service costs or quality-related issues leading to dissatisfaction.
- Customers with **no internet service** have the lowest churn (~7%), likely because they are less engaged with premium services.

3. Service Features & Churn Correlation

Value-Added Services (Security, Backup, Support) and Churn

Customers who **do not subscribe** to additional services such as:

- **Online Security:** Churn rate is **34%** vs. **18%** for those who have security.
- **Online Backup:** Churn rate is **32%** vs. **19%** for those with backup.
- **Tech Support:** Churn rate is **37%** vs. **17%** for those with support.
- This highlights the importance of these services in **reducing churn and improving customer satisfaction**.

Streaming Services & Churn

- Customers subscribed to **Streaming TV or Streaming Movies** have a churn rate of **30%**, compared to **22%** for those who do not subscribe.
- This may suggest that customers find these services **expensive or not valuable enough**, leading to a higher cancellation rate.

4. Contract Type & Financial Impact on Churn

Contract Type & Retention

- **Monthly Contract Users:** Highest churn at **46%**, suggesting that short-term customers are less committed and more likely to switch providers.
- **One-Year & Two-Year Contracts:** Churn rates drop significantly to **11% and 4%**, respectively, showing that **longer contracts improve retention**.
- Incentivizing long-term contracts could be an effective retention strategy.

Billing & Payment Behavior

- **Paperless Billing Users:** Churn rate of **29%**, compared to **21%** for those using traditional billing methods.
 - Indicates that paperless billing customers may find it easier to cancel or face dissatisfaction with automated charges.
 - **Electronic Check Payments:** Highest churn (~41%), while **credit card and bank transfers have the lowest churn (~15%)**, indicating a trust factor in payment methods.
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5. Key Takeaways & Business Recommendations

1. Targeted Retention for Senior Citizens & Fiber Users:

- Offer personalized pricing plans, better customer support, and ease of access to senior users.
- Improve service quality for fiber optic users to reduce dissatisfaction.

2. Promote Value-Added Services (Security, Backup, Support):

- Bundle essential services with internet plans to enhance customer engagement.
- Offer **free trials or discounts** on security and tech support to encourage adoption.

3. Encourage Long-Term Contracts:

- Provide discounts and loyalty rewards for **annual and two-year contract users** to reduce monthly contract churn.
- Create targeted campaigns to convert monthly users to longer-term commitments.

4. Re-evaluate Streaming & Billing Strategies:

- Improve the value proposition of streaming services to reduce churn.
 - Address concerns related to paperless billing and electronic check payments to build trust.
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Conclusion

By implementing these insights, the telecom company can proactively **reduce churn, enhance customer satisfaction, and improve revenue stability**. Retention efforts should focus on high-risk segments such as **senior citizens, monthly contract users, fiber optic subscribers, and those lacking value-added services**.