Executive Summary – Customer Churn Analysis

The customer churn analysis provides a data-driven understanding of why customers discontinues services and highlights the demographic, behavioural, and service-related patterns strongly associated with churn. The insights come from multiple visualizations, including pie charts, countplots, and service adoption charts, enabling a structured and measurable assessment of churn risks.

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1. Overall Churn Performance

- **26.54% of customers have churned**, representing more than one-quarter of the telecom provider's customer base.

- This churn level is sizeable and indicates an urgent need for targeted retention strategies.

- Initial preprocessing steps — such as replacing blank values in TotalCharges and converting 0/1 SeniorCitizen flags to yes/no — improved interpretability and made the analysis more accurate.

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2. Demographic Insights

Senior Citizens

- The proportion of **senior citizens who churn is noticeably higher** compared to non-senior customers.

- This indicates that older customers may experience more dissatisfaction or service-related challenges.

- A focused strategy for this demographic may significantly reduce churn.

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3. Tenure & Customer Lifetime Value

- **Long-tenure customers (multiple years)** show **very low churn rates**, often contributing stable revenue.

- **New customers (with 1–2 months of tenure)** show **the highest churn percentage**, indicating:

    o possible onboarding issues,

    o unmet expectations,

    o or price/feature dissatisfaction early in the customer journey.

- Retention interventions within the first **60 days** could yield significant improvements.

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4. Impact of Contract Type

- Customers on **month-to-month contracts account for the largest share of churn**.

- In contrast:

    - **One-year contracts** show **moderately lower churn**.

    - **Two-year contracts** show the **lowest churn percentage** across all contract types.

- Lock-in periods clearly improve customer stickiness.
  Offering incentives to shift month-to-month customers to annual contracts would reduce churn substantially.

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5. Service Usage Patterns & Churn

The analysis of value-added service usage (OnlineSecurity, OnlineBackup, TechSupport, StreamingTV, etc.) shows that:

- Customers **not using additional services** exhibit **higher churn percentages**.

- Customers who remain show much higher adoption of:

    - **Online Security**

    - **Online Backup**

    - **Device Protection**

    - **Tech Support**

- This suggests that greater engagement with premium/bundled services increases satisfaction and reduces churn risk.

- In the streaming services categories (StreamingTV and StreamingMovies), churn is also **higher among non-users**, indicating that service richness and engagement help retain customers.

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6. Payment Method Influence

- Customers paying via **Electronic Check** show the **highest churn rate** among all payment modes.

- Possible reasons include:

    - higher transaction fees,

    - lack of automation,

    - lower convenience compared to card or bank automatic payments.

- Payment digitalization campaigns may help shift users toward more stable billing channels.

Key Strategic Takeaways

1. **Reduce Early-Stage Churn**
   Focus on the first 1–2 months with onboarding, tutorials, service walkthroughs, and personalized support.

2. **Promote Long-Term Contracts**
   Discounts, loyalty points, or bundled packages can shift customers from month-to-month to 1–2 year plans.

3. **Increase Adoption of Value-Added Services**
   Customers using multiple services churn significantly less; cross-sell and up-sell strategies should be enhanced.

4. **Target High-Risk Segments**

   o   Senior Citizens

   o   Electronic Check users

   o   New customers
   These groups should receive high-touch interventions.

5. **Improve Payment Experience**
   Encouraging auto-pay or card payments may reduce churn.