



Customer Churn Analysis Summary.

This analysis investigates churn patterns in a telecom customer dataset to identify key drivers of churn. Visualizations and statistical breakdowns have been used to derive actionable insights.

♦ 1. Gender vs Churn

- **Observation:** Gender distribution between churned and non-churned customers is nearly equal.
 - **Insight:** Churn is not significantly impacted by gender.
 - **Female:** ~26.5% churn rate
 - **Male:** ~26.1% churn rate
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♦ 2. Senior Citizen vs Churn

- **Senior Citizens** have a **higher churn rate** than non-senior citizens.
 - **Senior Citizens (1):** ~41.7% churn rate
 - **Non-Senior Citizens (0):** ~23.6% churn rate
 - **Insight:** Older customers are more likely to discontinue service.
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♦ 3. Partner and Dependent Status

- Customers **without a partner** have a churn rate of ~32.1%, compared to ~20.7% for those with a partner.
- **Without dependents:** ~31.7% churn rate
- **With dependents:** ~16.1% churn rate
- **Insight:** Single and independent customers are more prone to churn.

♦ 4. Tenure vs Churn

- **Short-tenure customers (<10 months)** show significantly higher churn.
 - As **tenure increases**, **churn decreases**.
 - **Insight:** Retention is a challenge for new customers; strategies should focus on early engagement.
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♦ 5. Monthly Charges

- Customers with **higher monthly charges** tend to churn more.
 - Average monthly charge for churned customers is higher than non-churned.
 - **Insight:** Expensive plans could be a factor driving churn.
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♦ 6. Contract Type

- Churn rate based on contract:
 - **Month-to-Month:** ~43.9% churn
 - **One Year:** ~11.5% churn
 - **Two Year:** ~2.8% churn
 - **Insight:** Long-term contracts drastically reduce churn. Month-to-month users are at the highest risk.
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♦ 7. Internet Service Type

- Customers using **DSL and Fiber Optic** are more likely to churn compared to those with **no internet service**.
 - **Fiber Optic** churn rate: ~41.2%
 - **DSL** churn rate: ~18.8%
 - **No Internet** churn rate: ~7.5%
 - **Insight:** Quality or price concerns with fiber services could be contributing to higher churn.
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♦ 8. Payment Method

- Customers using **Electronic Check** have the highest churn rate (~45.3%).
 - Other methods like **Bank Transfer**, **Credit Card**, and **Mailed Check** have churn rates below 20%.
 - **Insight:** Electronic check users may represent low-satisfaction customers; targeting them can help reduce churn.
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♦ 9. Additional Services

- **Churn is lower** among users who have additional services like:
 - **Online Security**
 - **Tech Support**
 - **Streaming TV / Movies**
 - **Insight:** Bundled services help in customer retention.
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Key Takeaways

- **Target Month-to-Month & Electronic Check users** for churn reduction.
- **Engage new users early**, especially within the first 6 months, to prevent early exit.
- **Incentivize long-term contracts** and bundle services to improve retention.
- **Pay special attention to senior citizens and single customers** in service design and experience.
- **Investigate Fiber Optic users' churn**, as it may relate to quality or pricing issues.
- **Monitor customers with high monthly charges**, as they are more likely to churn.
- **Promote value-added services** like Online Security and Tech Support to improve loyalty.