

Customer Churn Analysis Summary and recommendations.

This analysis dives into customer churn data, highlighting key insights from demographic, service usage, contract, and payment method perspectives. Below is the summary based on the data and visualizations created in the script:

1. Overall Churn Rate

- **Churn Rate:**
 - **27.1%** of customers have churned, while **72.9%** have remained.
 - **Implication:** A significant portion of customers are leaving, suggesting a need for retention-focused strategies.
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2. Demographics and Churn

a) Gender:

- Churn rates are nearly equal between genders:
 - Male: **26.9%**
 - Female: **27.3%**
 - **Conclusion:** Gender does not significantly impact churn, and strategies should focus on other factors.

b) Senior Citizens:

- Senior citizens have a churn rate of **41.8%**, compared to **23.6%** for non-senior citizens.
 - **Implication:** Senior citizens are almost **1.8 times more likely to churn** than non-senior citizens.
 - **Recommendation:** Provide tailored solutions, such as simplified plans or dedicated customer support, to cater to senior customers.
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3. Service Usage and Churn

a) Internet Services:

- Customers using **Fiber Optic Internet** have a churn rate of **30.1%**, compared to **16.2%** for **DSL Internet** users.
 - **Insight:** Fiber Optic users may face dissatisfaction due to pricing or service quality.

- **Recommendation:** Focus on improving the Fiber Optic experience and offering value-driven packages.

b) Additional Services:

- Customers who subscribed to value-added services churn less:
 - **OnlineBackup:** Churn rate **19.3%** (vs. **33.3%** for those without it).
 - **TechSupport:** Churn rate **15.3%** (vs. **32.7%** for those without it).
 - **DeviceProtection:** Churn rate **22.8%** (vs. **30.7%** without it).
 - **Conclusion:** Additional services enhance customer satisfaction and loyalty.
 - **Recommendation:** Bundle these services to attract and retain customers.
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4. Tenure and Churn

- Customers with **less than 6 months of tenure** have the highest churn rate of **56.2%**.
 - Churn rates drop significantly for customers with tenure over 2 years, reaching as low as **11.1%**.
 - **Conclusion:** Early-stage customers are most likely to leave, indicating challenges in onboarding or meeting initial expectations.
 - **Recommendation:** Focus on improving onboarding, offering welcome benefits, and maintaining regular engagement during the first 6 months.
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5. Contract Type and Churn

- **Month-to-Month Contracts:** Churn rate of **43.9%**, compared to:
 - **One-Year Contracts:** **11.7%**
 - **Two-Year Contracts:** **3.7%**
 - **Conclusion:** Short-term contracts drive higher churn.
 - **Recommendation:** Promote long-term contracts with attractive discounts and value-driven incentives.
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6. Payment Methods and Churn

- Customers paying via **Electronic Check** have the highest churn rate (**45.3%**), while other payment methods show lower rates:
 - **Bank Transfer:** **16.0%**
 - **Credit Card:** **15.3%**
 - **Mailed Check:** **14.0%**
 - **Insight:** Electronic Check users may face payment convenience or trust issues.

- **Recommendation:** Provide incentives to switch to more stable payment methods like bank transfer or credit cards.
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7. Visualizations Summary

- **Pie Chart:** Illustrated the overall churn rate, emphasizing the significant percentage of customers leaving.
 - **Bar Charts:** Detailed churn by gender, senior citizen status, and payment methods.
 - **Stacked Bar Chart:** Highlighted the disparity in churn between senior and non-senior citizens.
 - **Histogram:** Revealed the relationship between tenure and churn, showing high early-stage churn.
 - **Subplots:** Explored multiple columns (e.g., TechSupport, StreamingTV) showing that customers with additional services are less likely to churn.
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8. Key Recommendations

1. **Onboard Effectively:** Focus on improving the experience for new customers during the first 6 months.
2. **Promote Long-Term Contracts:** Provide discounts and benefits for one- or two-year contracts to encourage retention.
3. **Enhance Value-Add Services:** Highlight benefits of services like OnlineBackup and TechSupport through marketing or bundled packages.
4. **Improve Fiber Optic Satisfaction:** Address potential pricing or service quality concerns for Fiber Optic users.
5. **Target Electronic Check Users:** Offer incentives for these users to switch to more convenient payment options.