Comprehensive Executive Summary: Customer Churn Analysis

Objective

This analysis aims to understand customer churn patterns, identify key influencing factors, and provide actionable recommendations to improve customer retention.

Data Description

The dataset consists of **7,043 customer records** with **21 features**, categorized into demographic details, account information, service usage, billing details, and the churn label.

Key Features:

1. **Demographics:**

    o   Gender: Male or Female

    o   SeniorCitizen: 1 (Yes) or 0 (No)

    o   Partner: Whether the customer has a partner

    o   Dependents: Whether the customer has dependents

2. **Subscription & Account Details:**

    o   Tenure: Number of months the customer has stayed

    o   Contract: Month-to-month, One-year, or Two-year contract

    o   PaymentMethod: Credit card, Bank transfer, Electronic check, etc.

3. **Services Used:**

    o   InternetService: DSL, Fiber Optic, or No Internet

    o   StreamingTV, StreamingMovies, TechSupport, OnlineSecurity

4. **Financial Details:**

    o   MonthlyCharges: The amount charged per month

    o   TotalCharges: The total amount billed to the customer

5. **Target Variable:**

    o   Churn: Yes (customer left) or No (customer stayed)

Key Findings & Insights

1. Overall Churn Rate

- Out of **7,043 customers**, approximately **27% (1,869 customers) churned**, while **73% (5,174 customers) stayed**.

- This indicates that nearly **1 in 4 customers** leave, representing a significant loss of business.

2. Demographic Analysis

Feature	Churn Rate (%)	Observations
Senior Citizens	**42.0%**	Higher churn than younger customers (Non-Seniors: 25%)
Gender	**Nearly Equal**	No strong correlation between gender and churn
Customers with Dependents	**15.2%**	Much lower churn compared to those without dependents (32%)

📌 **Key Insight:**
Senior citizens are at a much **higher risk of churning (42%)**, indicating the need for **personalized retention strategies** for older customers.

3. Contract Type & Churn Impact

Contract Type	% of Customers	Churn Rate (%)
Month-to-Month	55%	45%
One-Year	25%	11%
Two-Year	20%	3%

📌 **Key Insight:**

- **Customers with month-to-month contracts are 15 times more likely to churn** than those with two-year contracts.

- Offering **discounts or benefits for long-term commitments** can **significantly reduce churn**.

4. Internet Service & Churn Rate

Internet Service Type	% of Customers	Churn Rate (%)
DSL	35%	19%
Fiber Optic	44%	41%
No Internet	21%	10%

📌 **Key Insight:**

- **Fiber optic users have the highest churn rate (41%)**, possibly due to pricing or service dissatisfaction.

- **DSL users are more stable, with only a 19% churn rate**.

- Customers without internet services are the most stable.

Actionable Step:
Investigate why fiber optic customers are leaving—could be due to **pricing, service outages, or competition**.

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5. Impact of Additional Services on Churn

Service Feature	Customers with Service (%)	Churn Rate (%)
Online Security	46%	15%
Tech Support	41%	14%
Streaming Services	49%	39%

📌 **Key Insight:**

- **Customers who subscribe to Online Security and Tech Support have significantly lower churn rates (~15%).**
- **Streaming services alone do not prevent churn**, indicating that media consumption is not a primary factor in retention.
- Offering **bundled packages that include Online Security and Tech Support** could be an effective churn reduction strategy.

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6. Financial Impact: Monthly & Total Charges

Financial Metric	High-Churn Group	Low-Churn Group
Average Monthly Charges	$75	$61
Average Total Charges	$1,500	$2,500

📌 **Key Insight:**

- **Customers with higher monthly bills ($75+) are at greater risk of churn.**
- **Lower total charges in the churn group suggest that newer customers tend to leave earlier.**

Actionable Step:
Offer **discounted first-year plans** to increase the tenure of new customers and prevent early churn.

Actionable Recommendations

1. **Encourage Long-Term Contracts**
   - Customers on month-to-month plans have a **45% churn rate**, compared to just **3% for two-year contracts**.

o   Offering **discounted annual plans** or loyalty bonuses can improve retention.

2. **Improve Service Experience for Fiber Optic Users**

   o   **41% of fiber optic users churn**, suggesting possible dissatisfaction.

   o   Conduct **customer surveys** to address complaints.

3. **Leverage Tech Support & Online Security Services**

   o   Customers with these add-ons have **15% lower churn rates**.

   o   Consider **bundled plans** to encourage adoption.

4. **Adjust Pricing Strategies**

   o   High-churn customers pay an average of **$75 per month**, while low-churn customers pay $61.

   o   Implement **loyalty discounts for long-tenure customers**.

5. **Target New Customers with Retention Offers**

   o   New customers with low tenure churn faster.

   o   Offer **personalized onboarding and early retention incentives**.

Conclusion

This analysis highlights the **major contributors to customer churn**, emphasizing the importance of **contract types, service quality, pricing strategies, and additional service offerings**. By implementing these data-driven recommendations, the company can **significantly improve customer retention and reduce churn-related revenue loss**.