Telecom Customers Churn Analysis in Power BI

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My Interactive Portofolio (Github).

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What is Customer Churn?

Customer churn refers to the phenomenon where customers or subscribers stop engaging with or doing business with a company or service.

In the telecommunications industry, customers have numerous service providers to choose from, making it easy for them to switch from one provider to another.

The dataset is a customer churn dataset, containing information about 7,043 customers, with the following key features:

How About the Project ?

This project uses Power BI Desktop to help businesses prevent customer loss and improve customer service.

Benefits

1. Reduce customer loss: Identify and help customers at risk to keep them longer.
2. Improve customer satisfaction: Understand customer needs better for better service.
3. Make data-driven decisions: Use insights to make better choices for keeping customers happy.

Dataset :

Customer Demographic :

- customerID: Unique identifier for each customer.
- gender: Gender of the customer.
- SeniorCitizen: Indicates whether the customer is a senior citizen (1 = Yes, 0 = No).
- Partner and Dependents: Whether the customer has a partner or dependents.

Account Information:

- tenure: Number of months the customer has stayed with the company.
- Contract: Type of contract (e.g., Month-to-month, One year, Two year).
- PaperlessBilling: Whether the customer uses paperless billing.
- PaymentMethod: Payment method used by the customer.

Services Signed Up:

- PhoneService and MultipleLines: Whether the customer has phone service and multiple lines.
- InternetService: Type of internet service (DSL, Fiber optic, None).
- Services such as OnlineSecurity, OnlineBackup, DeviceProtection, TechSupport, StreamingTV, and StreamingMovies.

Charges:

- MonthlyCharges: The monthly amount charged to the customer.
- TotalCharges: The total amount charged to the customer.

Customer Interaction:

- numAdminTickets and numTechTickets: Number of administrative and technical support tickets raised by the customer.

Churn:

- Churn: Indicates whether the customer churned (Yes = churned, No = retained).
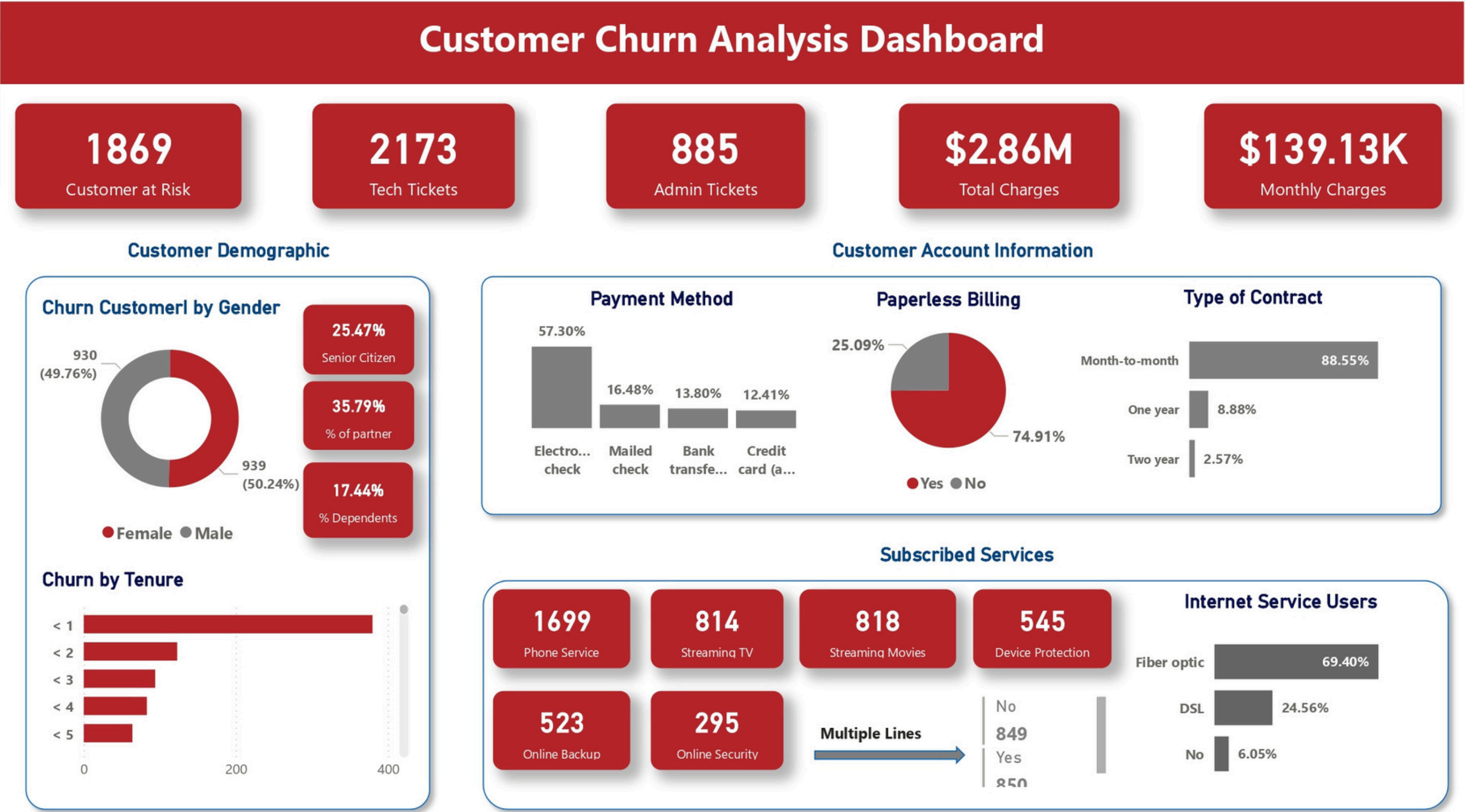
Key features

✓ **Predictive Churn Modeling:**

Identify customers who are likely to leave before they actually do, allowing the company to take proactive steps to retain them.

✓ **Customer Segmentation:**

Organize customers into groups based on similar traits and their risk of leaving, enabling more focused marketing and engagement strategies.

Built with Power BI Desktop

Customer Churn Analysis Dashboard

1869	2173	885	$2.86M	$139.13K
Customer at Risk	Tech Tickets	Admin Tickets	Total Charges	Monthly Charges

Customer Demographic

Churn Customerl by Gender

930 (49.76%)
939 (50.24%)

● Female ● Male

- 25.47% Senior Citizen
- 35.79% % of partner
- 17.44% % Dependents

Churn by Tenure

Tenure	
< 1	
< 2	
< 3	
< 4	
< 5	

0   200   400

Customer Account Information

Payment Method

- Electro... check: 57.30%
- Mailed check: 16.48%
- Bank transfe...: 13.80%
- Credit card (a...: 12.41%

Paperless Billing

25.09%
74.91%

● Yes ● No

Type of Contract

- Month-to-month: 88.55%
- One year: 8.88%
- Two year: 2.57%

Subscribed Services

1699	814	818	545
Phone Service	Streaming TV	Streaming Movies	Device Protection

523	295
Online Backup	Online Security

Multiple Lines →

No 849
Yes 850

Internet Service Users

- Fiber optic: 69.40%
- DSL: 24.56%
- No: 6.05%

Key Insights

✓   the customers at Risk are 1,869, meaning that out of 7,043 customers, 1,869 decided to leave.

✓ The length of a customer's contract and their usage patterns influence their behavior. Customers with monthly contracts and shorter tenures are more likely to churn than those with longer commitments.

✓ Customers who do not have partners or dependents are more likely to leave compared to those who do.

✓ Gender does not appear to significantly impact churn rates. However, senior citizens seem to leave more often than younger customers.

✓ Customers using the Fibre Optic internet service are less likely to churn than those using other types of internet service. The payment method also affects their decision to stay, with electronic payments being the most common among loyal customers.

✓ Customers who do not receive services such as Tech Support, Device Protection, and Online Security are more dissatisfied and tend to leave more frequently.

Suggestions

✓ The company could think about extending the contract length for customers who are at risk of leaving or those who have lower engagement. It might be helpful to remind customers of their obligations to encourage them to stay longer with the service.

✓ The company could offer additional services to customers who are at risk of leaving. They have potential to become loyal customers if their needs are addressed.

✓ The company should provide an incentive program to encourage customers to stay, such as discounts or rewards.

✓ The company could also improve customer support, device protection, and online security as part of their strategy. These services can increase customer satisfaction and loyalty.

THANK YOU