

CUSTOMER CHURN ANALYSIS DASHBOARD

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Tools: Power BI

Project Overview

- Analyzed customer data to identify churn patterns and retention opportunities
- Focused on key churn drivers and high-risk customer segments
- Developed a **3-page interactive Power BI dashboard**
- Page 1: Customer overview with key KPIs and insights
- Page 2: Detailed analysis of customer churn reasons
- Page 3: Action-oriented insights and retention recommendations
- Supports data-driven decision-making to reduce customer churn

Dataset Overview

- **Customer Info:** CustomerID, Gender, Senior Citizen, Partner, Dependents
- **Services Subscribed:** Phone Service, Multiple Lines, Internet, Online Security, Online Backup, Device Protection, Tech Support, Streaming TV/Movies
- **Account & Charges:** Tenure Months, Monthly Charges, Total Charges
- **Contract & Payment:** Contract Type, Paperless Billing, Payment Method
- **Churn Metrics:** Churn Label (Yes/No), Churn Value, Churn Score, CLTV, Churn Reason

Quick Insights:

- Churn tracked via Yes/No
- Tenure & Charges → customer loyalty
- Services & Contract influence churn
- Payment method impacts retention

Dashboard – Page 1 (Insights)

Customer Churn Analysis Dashboard

7K Total Customer 2K Churned Customers 32.37 Average_Tenure 16.06M Total Revenue 0.27 Churn Rate %

Insights

Churn Reason

Actions

Gender: All

Contract: All

Payment Method: All

Total Customer by Internet Service

Internet Service	Total Customer
Fiber optic	3.1K
DSL	2.4K
No	1.5K

Total Customer by Contract

Contract	Percentage
Month-to-month	55.02%
Two year	24.07%
One year	20.91%

Payment Method

Payment Method	Total Customer
Bank transfer (automatic)	1544
Credit card (automatic)	1522
Electronic check	2365
Mailed check	1612
Total	7043

Total Customer by Tech Support

Tech Support	Total Customer
No	3.5K
Yes	2.0K
No internet...	1.5K

Customer Distribution by Dependents

Dependents	Total Customer
No	5.4K
Yes	1.6K

Navigation: Insights, Churn Reason, Actions, +

Tools, Skills & Techniques Used

Business Intelligence & Analytics

- Power BI Dashboard Development
- KPI Design & Business Metrics

Data Preparation

- Power Query (Data Cleaning & Transformation)
- Data Modeling

Analytical Skills

- Customer Churn Analysis
- Customer Segmentation
- Trend & Pattern Analysis

Technical Skills

- DAX (Measures & Calculations)
- Data Visualization & Storytelling

Dashboard – Page 2 (Churn Reason)

Customer Churn Analysis Dashboard

7K Total Customer 2K Churned Customers 32.37 Average_Tenure 16.06M Total Revenue 0.27 Churn Rate %

Insights

Churn Reason

Actions

Churn Reason: All

Contract: All

Payment Method: All

Churned Customers by Churn Reason

Churn Reason	Churned Customers
Network reliability	103
Product dissatisfaction	102
Price too high	98
Service dissatisfaction	89
Moved	53
Long distance charges	44
Poor expertise of phone support	20
Poor expertise of online support	19

Churned Customers vs Tech Support

Tech Support Status	Churned Customers
No	1.4K
Yes	0.3K
No internet	0.1K

Network reliability, product dissatisfaction, and pricing issues are the leading Reasons for customer churn. Customers without tech support show significantly higher churn, highlighting the impact of service experience on retention.

Dashboard – Page 3 (Actions)

Customer Churn Analysis Dashboard

7K Total Customer 2K Churned Customers 32.37 Average_Tenure 16.06M Total Revenue 0.27 Churn Rate %

Insights

Churn Reason

Actions

Gender: All

Contract: All

Payment Method: All

Churned Customers by Contract

Contract Type	Count
Month-to-month	1655
One year	166
Two year	48

Churned Customers by Tech Support

Tech Support Category	Count
No	1446
Yes	310
No internet service	113

Customers on month-to-month contracts and without technical support show the highest churn. Offering discounts on long-term contracts and improving customer support quality can help reduce churn and improve customer retention.

Key Actions:

- Promote long-term contracts with discounts.
- Improve technical support experience.
- Focus retention offers on high-risk customers.

Dashboard Explanation

- **Page 1: Customer Overview**
Provides a high-level view of total customers, churn rate, revenue KPIs, and customer distribution by tenure, contract type, and services.
- **Page 2: Churn Reason Analysis**
Analyzes key reasons behind customer churn, highlighting service issues, contract types, and payment methods contributing to higher churn.
- **Page 3: Retention & Actionable Insights**
Identifies high-risk customers and presents data-driven insights to support targeted retention and customer engagement strategies.

Problem Statement

- Customer churn remains a critical challenge for subscription-based businesses, negatively impacting revenue and long-term growth.
- The business lacks a consolidated analytical view to monitor churn trends, identify key churn drivers, and detect high-risk customer segments.
- This dashboard is designed to analyze customer data, uncover churn patterns, and provide actionable insights that support data-driven retention strategies.

Business Impact

- Helps identify high-risk customers early
- Supports retention-focused decision making
- Reduces revenue loss due to churn
- Improves customer satisfaction & loyalty

Key Learnings

- Translating data into actionable insights
- Designing business-focused dashboards
- Understanding customer behavior patterns
- Using analytics for real-world business problems

Future Enhancements

- **Predictive Churn Modeling**
Apply machine learning models to estimate churn probability and identify high-risk customers in advance.
- **Real-Time Monitoring & Alerts**
Enable live data refresh and automated alerts to track churn trends and support proactive retention actions.
- **Advanced Customer Segmentation**
Enhance segmentation using usage behavior, tenure, and customer lifetime value (CLTV).
- **CRM & Business Integration**
Integrate insights with CRM systems to enable targeted marketing and personalized retention strategies.

THANK YOU