

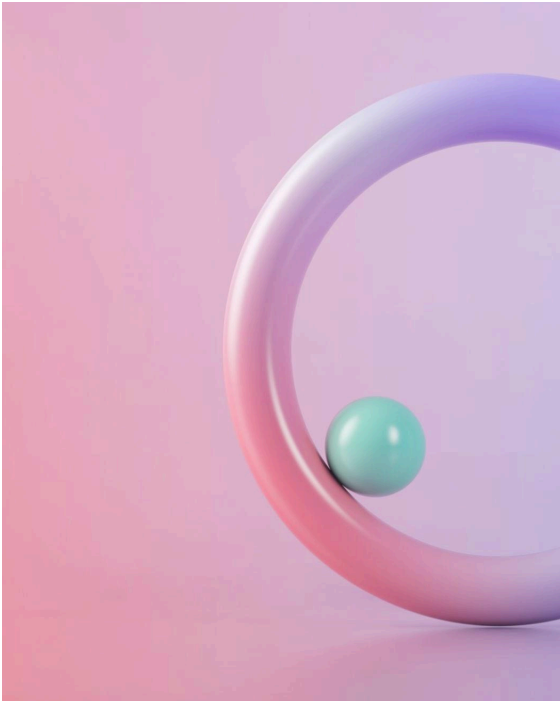
# Telco Customer Churn Analysis

Executive summary

## Overview

The dataset consists of **7,043 customers** and **21 features**, covering demographics, services, account details, and churn behavior.

The primary objective of this analysis is to **understand customer churn patterns** and **develop retention strategies**.



# Key findings

1. Churn Rate Analysis
2. Impact of Contract Type on Churn
3. Billing & Payment Method Influence
4. Monthly Charges & Total Charges Impact
5. Service-Based Churn Trends
6. Demographic Factors

## 1. Churn Rate Analysis

- a. The **overall churn rate is approximately 27%**, meaning that over **1 in 4 customers leave the service**.
- b. Retaining even a small percentage of these customers can lead to significant revenue improvements.

## 2. Impact of Contract Type on Churn

- a. Customers with a **month-to-month contract** have the highest churn rate (**~43%**), whereas those with **one-year (~11%)** and **two-year contracts (~3%)** show significantly lower churn.
- b. This suggests that **long-term contracts help retain customers** and reduce churn risk.

## 3. Billing & Payment Method Influence

- a. **Paperless billing customers churn at a rate of ~40%**, whereas customers receiving mailed bills churn at a significantly lower rate (**~20%**).
- b. **Electronic check users have the highest churn rate (~45%)**, compared to credit card (**~16%**) and bank transfer users (**~15%**).
- c. This indicates that customers who manually handle payments are **more likely to leave**, while those using automated payments tend to stay longer.

#### 4. Monthly Charges & Total Charges Impact

- a. Churned customers tend to have **higher MonthlyCharges (~\$75 on average)** than retained customers (~\$60).
- b. However, **TotalCharges for churned customers is lower**, suggesting that many churned customers are relatively new and leave early in their contract.
- c. This highlights the importance of **early-stage customer engagement** to improve retention.

#### 5. Service-Based Churn Trends

- a. Customers **without Online Security and Tech Support** have a **significantly higher churn rate (~45%)** compared to those with these services (~15-20%).
- b. **Fiber optic internet customers churn at a higher rate (~42%)** compared to DSL users (~20%).
- c. **Customers with streaming services (TV & movies)** show no significant difference in churn behavior.

#### 6. Demographic Factors

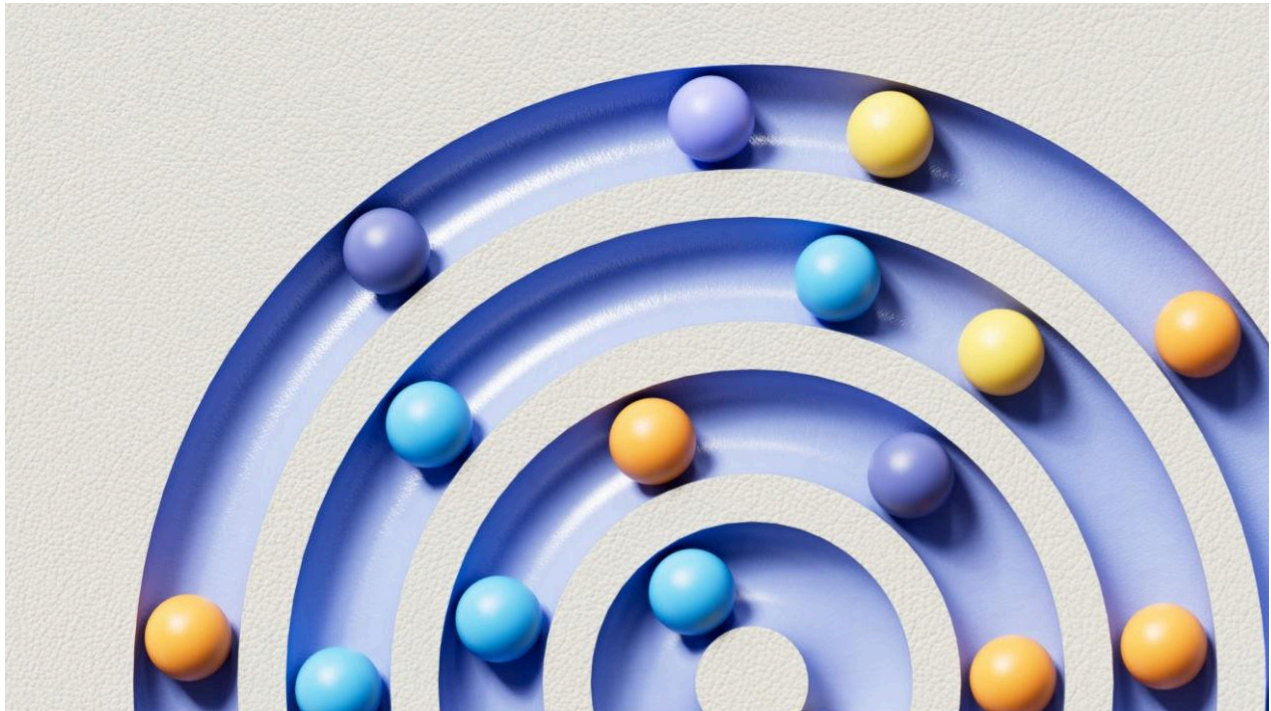
- a. **Senior citizens (age 65+)** have a **higher churn rate (~40%)**, whereas younger customers show more stability.
- b. Customers **without dependents or partners** tend to churn more frequently (~35%), suggesting that family-oriented customers are more loyal.

# Recommendations



1. **Encourage Long-Term Contracts:** Offer discounts or incentives for customers to switch from **month-to-month** to **yearly plans** to increase retention.
2. **Optimize Payment Methods:** Promote **automatic payment options** (credit card, bank transfer) to reduce churn associated with **electronic check users**.
3. **Enhance Customer Onboarding & Early Engagement:** Since churned customers often have **lower TotalCharges**, focus on **engaging new customers within the first few months** through discounts, personalized support, and loyalty programs.
4. **Promote Value-Added Services:** Offering **bundled security and tech support services** at discounted rates may **help retain customers** who are otherwise at high risk of churning.
5. **Targeted Marketing for At-Risk Segments:** Implement churn prediction models to **proactively engage customers** with high churn probability, particularly **senior citizens, single customers, and fiber optic users**.

# Conclusion



This analysis provides clear indicators of what drives customer churn and offers actionable strategies to **reduce customer loss and improve retention rates**. Implementing a **proactive, data-driven retention strategy** focusing on **long-term contracts, billing optimization, and service enhancements** can help minimize churn and maximize customer lifetime value.