

## Executive Summary: Customer Churn Analysis

This analysis evaluates **customer churn patterns** using data-driven insights and visualizations. The dataset reveals that **27% of customers have churned**, highlighting a significant retention challenge. The study explores key factors such as **demographics, service types, contract lengths, and payment methods**, which influence customer behavior.

### Key Findings:

📌 **Overall Churn Rate:** 27% of customers have churned, while 73% remain active.

📌 **Senior Citizens & Churn:** 42% of senior citizens have churned, compared to 24% of non-senior customers, suggesting older customers may require targeted engagement strategies.

📌 **Service Type Influence:**

- **Fiber optic internet users** have the highest churn rate (42%), compared to **DSL users** (20%) and those without internet service (8%).
- **Customers without Online Security or Tech Support** churn at a rate of 46%, compared to 14% among those with these services, emphasizing the importance of security and support features.

📌 **Contract Type & Churn:**

- **Month-to-month contract users** show the highest churn rate at 60%, while only 11% of yearly contract users churn.
- Customers with **two-year contracts** have the lowest churn rate (3%), indicating long-term commitments help in retention.

📌 **Payment Method & Churn:**

- Customers using **electronic checks** have the highest churn rate (45%), while those using credit cards or bank transfers have significantly lower churn (15%-20%).
- This suggests that customers paying via electronic checks may need better engagement strategies.

### Key Recommendations for Reducing Churn:

- ✓ Encourage customers to switch to **long-term contracts** by offering better incentives.
- ✓ Promote **security features (Online Security, Tech Support, Device Protection)** to reduce churn by nearly 30%.
- ✓ Improve retention strategies for **fiber optic users**, such as offering better pricing or loyalty programs.
- ✓ Address **payment method issues** by promoting **auto-pay options for electronic check users**.
- ✓ Implement **proactive customer support** for senior citizens and at-risk customers.

By focusing on **service quality, contract flexibility, and personalized engagement**, businesses can **increase customer retention and reduce churn**. 📊📈