

## Executive Summary:

### Telecom Customer Churn Analysis

This report presents an in-depth analysis of customer churn within a telecom service provider's dataset consisting of 7,043 customers. The goal was to uncover factors contributing to customer attrition and identify actionable insights to improve retention rates.

#### Key Findings

- **Overall Churn Rate:** 26.54% of customers have churned, indicating that more than one in four customers are leaving the service.
- **Demographic Influence:**
  - **Senior Citizens** have a significantly higher churn rate (41.7%) compared to non-seniors (23.6%), suggesting age-based service adjustments may be warranted.
- **Tenure Impact:**
  - Most churn occurs within the first 10 months of tenure.
  - Customers with longer tenure demonstrate higher loyalty, with minimal churn beyond 60 months.
- **Contract Type:**
  - **Month-to-month contracts** correlate with the highest churn, while **one-year and two-year contracts** show significantly lower churn, highlighting the effectiveness of longer commitments in customer retention.
- **Service Features & Churn Behavior:**
  - Lack of value-added services such as **tech support, online security, device protection, and streaming options** corresponds with elevated churn.
  - Customers not subscribed to internet services or using **fiber optic internet** tend to churn more than DSL users.
- **Payment Method Trends:**
  - **Electronic check** payments show the highest churn.
  - **Automatic payments (credit card/bank transfer)** are associated with better customer retention.

#### Actionable Recommendations

- **Enhance Early-Stage Support:** Improve onboarding and customer support during the initial months to prevent early churn.
- **Target Senior Customers:** Create simplified plans and communication strategies tailored to senior demographics to lower their churn rate.
- **Promote Longer-Term Contracts:** Incentivize customers to opt for one-year or two-year plans via loyalty benefits and discount packages.
- **Boost Value-Added Services:** Expand and promote services like tech support and security features which directly influence retention.
- **Encourage Auto-Payment Options:** Streamline the payment process and offer benefits for adopting automatic payment methods.