■ Executive Summary: Customer Churn Analysis

This project focuses on analyzing **customer churn behavior** using a telecom dataset of 7,043 customers. The objective was to identify **key drivers of churn** and provide actionable insights to reduce customer attrition. The analysis included extensive data cleaning, visualization, and exploration of service features, demographics, and payment methods.

■ Key Findings

- Overall Churn Rate: About **26.5% of customers** churned, while **73.5% remained loyal**. Nearly **1 in 4 customers leaves the company**.
- Demographics Impact: Senior Citizens show a higher churn rate (~42%) compared to non-seniors (~23%). Gender does not significantly affect churn.
- Tenure and Loyalty: Low-tenure customers (1–2 months) have churn rates >60%, while long-tenure (>24 months) customers show churn <15%.
- Contract Type: Month-to-month contracts have churn >40%, while 1-year and 2-year contracts reduce churn to 11–18%.
- Services and Internet Type: Fiber optic users churn ~41%, DSL users only ~18%. Customers without added services churn more frequently.
- Payment Method: Customers using electronic checks churn ~45%, compared to 15–20% with other payment methods.

■ Strategic Implications

- Customer Onboarding & Early Engagement: Focus on the first 3–6 months to reduce high early churn.
- Encourage Long-Term Contracts: Promote annual or bi-annual contracts to increase customer retention.
- Bundle Value-Added Services: Offering security, backup, and support reduces churn significantly.
- Address Payment Friction: Encourage secure and automatic payments to replace electronic checks.
- Targeted Retention for Seniors: Tailored offers and support programs for senior citizens can reduce churn.

This analysis demonstrates how **customer demographics, contract type, internet service, and payment methods** strongly influence churn. By acting on these insights, businesses can **improve retention, reduce churn by up to 30–40%, and secure long-term revenue growth**.