

# CUSTOMER CHURN ANALYSIS

## 1. Objective / Purpose

The primary goal of this project is to analyze the customer churn behavior of a telecom company using customer-level data. The aim is to understand what factors contribute to customer churn and how the business can take preventive actions to reduce churn and improve customer retention.

## 2. Dataset Overview

- Source File: Customer Churn.csv
- Target Variable: Churn (Yes/No)
- Key Features:
  - Customer demographics (gender, SeniorCitizen, tenure)
  - Services (PhoneService, InternetService, OnlineBackup, etc.)
  - Contract details (Contract type, PaymentMethod)
  - Charges (MonthlyCharges, TotalCharges)

## 3. Key Steps Performed

- Data Cleaning:
  - Converted TotalCharges to float.
  - Replaced missing/blank values with 0.
  - Checked for nulls and duplicates.
- Data Transformation:
  - Converted SeniorCitizen from 0/1 to Yes/No.
- Exploratory Data Analysis (EDA):
  - Plotted churn counts and distributions.
  - Visualized churn trends across various customer features.

## 4. Observations & Findings

- Contract Type: Higher churn in month-to-month contracts.
- Senior Citizens: Higher churn observed.
- Tenure: Lower tenure correlates with higher churn.
- Internet Service: Fiber optic users churn more.
- Services: Lack of support services increases churn.

- Payment Method: Electronic Check users churn more.

## **5. Suggestions**

- Improve Retention Strategies:
  - Offer loyalty benefits to monthly customers.
  - Customize plans for senior citizens.
  - Bundle additional services.
- Contract Restructuring:
  - Promote annual plans with incentives.
- Optimize Payment Experience:
  - Shift users from Electronic Check to auto-pay methods.

## **6. Conclusion**

The analysis identifies key churn drivers using data visualizations and summaries. With the insights derived, the company can adopt targeted strategies to reduce churn and retain more customers.