

## Power BI Project – Customer Churn Analysis

### Problem Statement:

A telecom company is experiencing high customer churn, leading to revenue loss and increased operational costs. To improve customer retention and make data-driven business decisions, the company requires an interactive Power BI dashboard that analyzes key factors influencing churn. The goal of this project is to visualize customer demographics, service subscriptions, account types, payment methods, and support interactions to uncover patterns, highlight risk segments, and support strategic interventions.

By leveraging this dashboard, business stakeholders can monitor churn trends, identify at-risk customer groups, assess the financial impact of churn, and evaluate the effectiveness of services and support in retaining customers.

### KPI Requirements

- **Churn Rate:** % of customers who churned during a selected period
- **Monthly Revenue Loss due to Churn:** Estimated financial impact of churn
- **Churn by Contract Type:** Identifies which contract types are most prone to churn
- **Churn by Tenure:** Highlights customer loyalty based on length of stay
- **Churn by Payment Method:** Tracks churn distribution across payment preferences
- **Support Tickets vs. Churn:** Correlation between service dissatisfaction and churn
- **% Device Protection:** Percentage of customers subscribed to Device Protection
- **% No-Multiple Lines:** Percentage of customers without multiple lines
- **% of Dependents:** Percentage of customers who have dependents
- **% of Partner:** Percentage of customers who have a partner
- **% Online Backup:** Percentage of customers using Online Backup
- **% Online Security:** Percentage of customers using Online Security
- **% Phone Service:** Percentage of customers with Phone Service
- **% Streaming Movies:** Percentage of customers using Streaming Movies
- **% Streaming TV:** Percentage of customers using Streaming TV
- **% Tech Support:** Percentage of customers subscribed to Tech Support
- **% Yes-Multiple Lines:** Percentage of customers with multiple lines
- **% Senior Citizen:** Percentage of customers who are senior citizens

### Visualizations Used:

- **Churn Distribution by Demographics (Bar/Donut Charts)** – e.g., Gender, Senior Citizens
- **Churn by Internet/Streaming Services** – To see if certain services are linked to higher churn
- **Heat Map of Churn by Geography (if location is included)** – Spot regional trends

- **Trend of Monthly Charges vs. Churn** – To examine if higher costs contribute to churn
- **Top Risk Segments (Stacked Bar/Matrix)** – Combining multiple factors like contract + tenure

**Business Objective:**

Identify the high-risk customer segments and root causes of churn to help the retention team take proactive action such as offering discounts, switching plans, or improving service delivery.