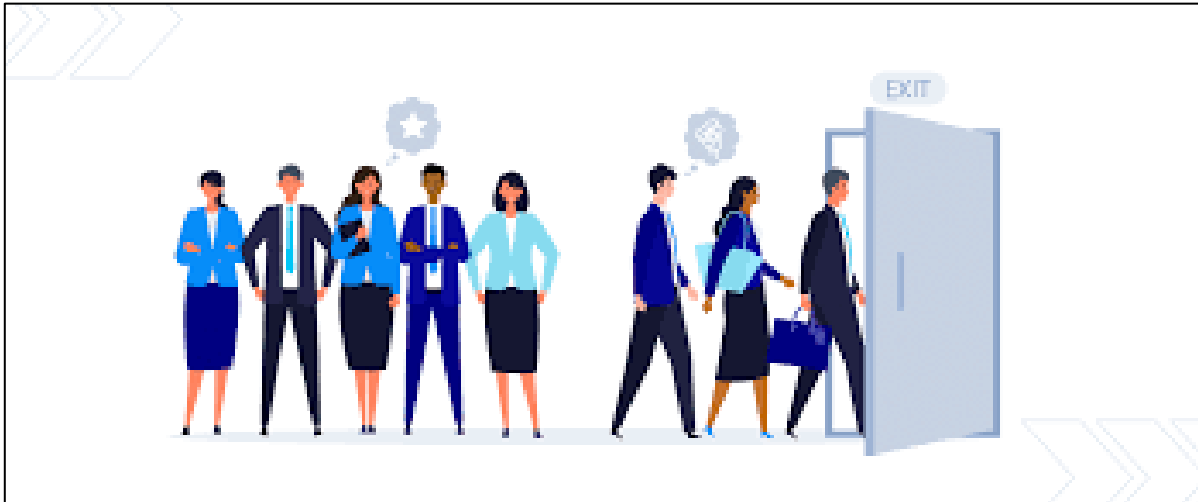# PROJECT REPORT
CUSTOMER CHURN ANALYSIS

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1. Introduction

Customer churn is a critical business problem, especially in subscription-based industries such as telecom, banking, and SaaS. Churn occurs when customers discontinue using a service. High churn leads to revenue loss and increased acquisition costs.

This project aims to analyze customer behavior using Power BI and identify the key factors influencing churn. The goal is to provide actionable insights that help the company improve customer retention.

2. Problem Statement

A telecom company has observed a decline in active customers, which directly impacts revenue. Management suspects that contract types, tenure, spending patterns, and support interactions may influence churn. However, they lack clear insights into the exact causes. The objective of this project is to analyze the customer data and identify high-risk segments.

3. Project Objectives

- Clean and transform raw customer data.
- Calculate churn-related KPIs.
- Analyze churn based on:
  - Contract type
  - Tenure
  - Support calls
  - Customer spending
- Build an interactive Power BI dashboard.
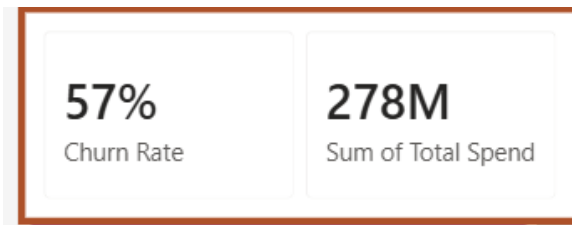- Provide data-driven recommendations.

4. Tools and Technologies

- **Microsoft Power BI Desktop** – Dashboard creation and visualization.
- **Power Query** – Data cleaning and transformation.
- **DAX (Data Analysis Expressions)** – KPI and measure calculations.
- **Dataset** – Customer churn dataset.

5. Key Metrics (KPIs)

According to the dashboard:

- **Churn Rate:** 57%
- **Total Spend:** 278M

57% Churn Rate   278M Sum of Total Spend

The churn rate indicates that more than half of the customers in the dataset have discontinued the service, which signals a serious retention issue.

6. Dashboard Analysis

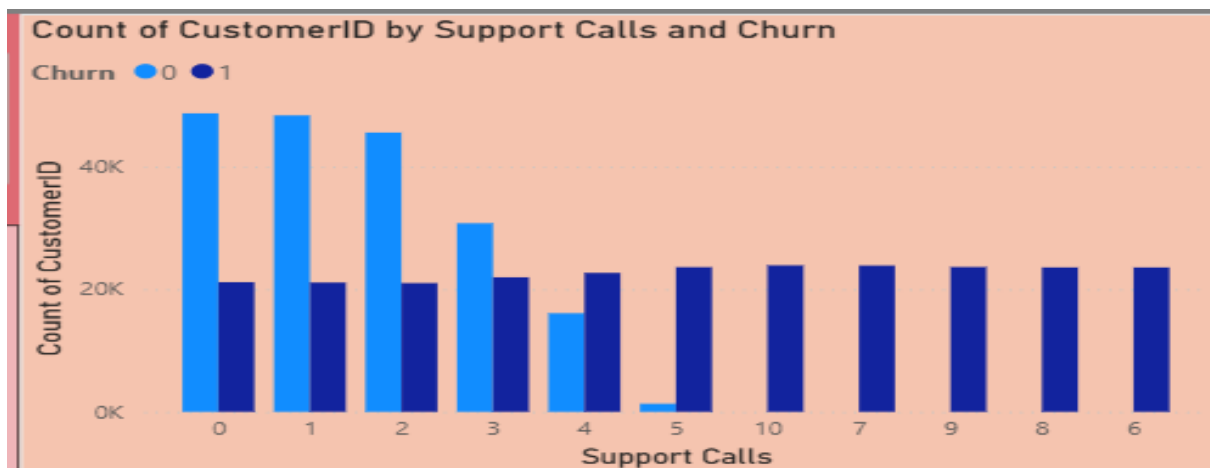## 6.1 Churn by Contract Length

The contract length visual shows:

- **Monthly contracts** have the highest churn.

- **Annual and quarterly contracts** show lower churn.

Insight: Customers with short-term contracts are more likely to leave.

6.2 Churn by Support Calls

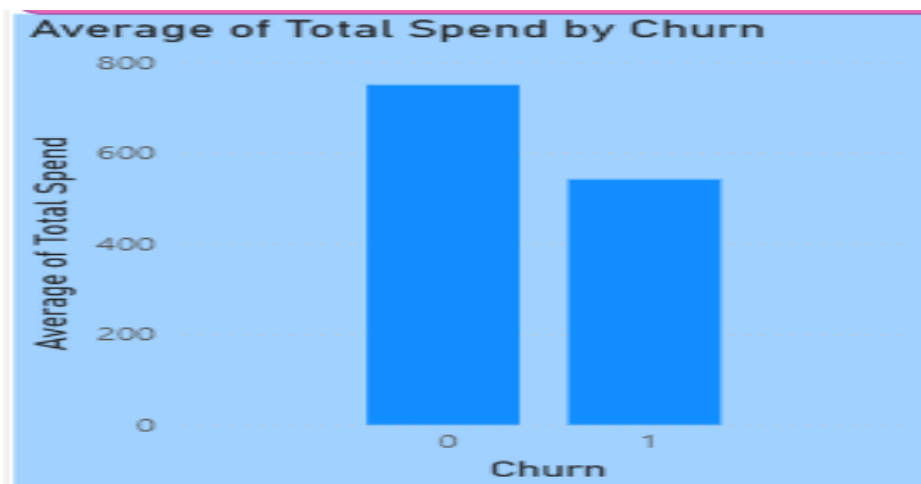The bar chart shows churn based on the number of support calls.

Observation:

- Customers who make more support calls tend to churn more.

- Frequent support interactions may indicate dissatisfaction.

Insight: Poor service experience increases churn probability.

6.3 Average Spend by Churn
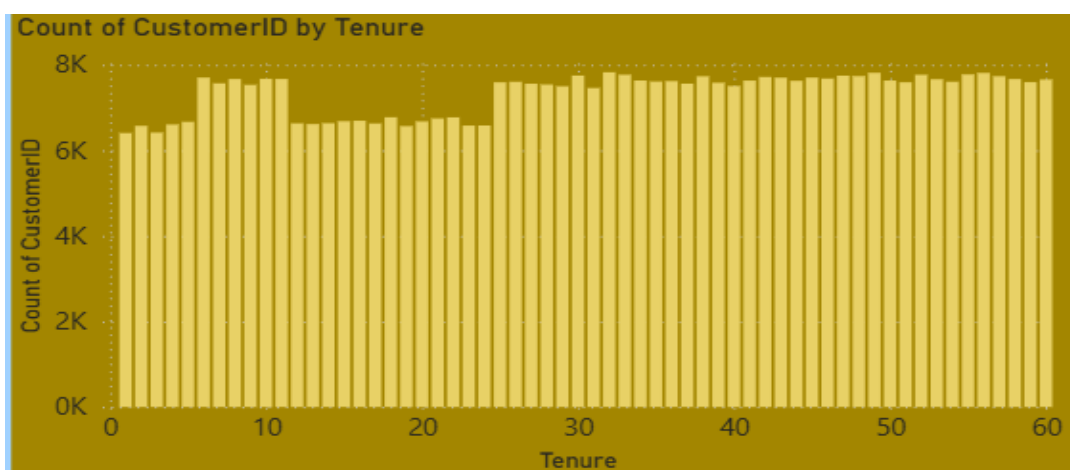
The chart comparing average spend shows:

- Customers who churn have a **higher average spend** than those who stay.

Insight: High-paying customers are more likely to leave, possibly due to pricing or value concerns.

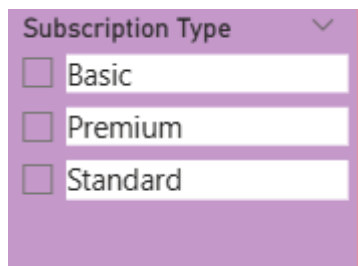# 6.4 Churn by Tenure

The tenure distribution chart shows:

- Most churn occurs during the **early months** of customer lifecycle.

- Long-tenure customers are more stable.

Insight: The first few months are the most critical for customer retention.

6.5 Churn by Subscription Type

The subscription type slicer indicates differences between:

- Basic
- Standard
- Premium

Insight: Certain subscription tiers may experience higher churn, especially if pricing or features are not competitive.

7. Key Findings

1. Short-term contract customers are more likely to churn.
2. High support call frequency is linked to higher churn.
3. High-spending customers show higher churn rates.
4. Most churn occurs during the early tenure period.

8. Recommendations

1. **Promote Long-Term Contracts**

   o Offer discounts for annual or quarterly plans.

2. **Improve Customer Support**

   o Reduce issue resolution time.

   o Monitor customers with frequent support calls.

3. **Retention for High-Value Customers**

   o Provide loyalty offers.

   o Introduce personalized plans.

4. **First-3-Month Engagement Program**

   o Welcome offers.

   o Satisfaction surveys.

9. Conclusion

This Power BI dashboard provides valuable insights into customer churn patterns. The analysis shows that contract length, support experience, tenure, and spending significantly influence churn behavior.By implementing targeted retention strategies, the company can reduce churn and improve overall profitability.

Customer Chern Analysis

57%
Churn Rate

278M
Sum of Total Spend

Subscription Type
- [ ] Basic
- [ ] Premium
- [ ] Standard

Female

Male

Count of CustomerID by Support Calls and Churn

Churn ● 0 ● 1

Contract Length

Annual | Monthly | Quarterly

Count of CustomerID by Churn

190.83K (43.29%)

250K (56.71%)

Churn
● 1
● 0

Average of Total Spend by Churn

Count of CustomerID by Tenure

Count of CustomerID by Contract Length

100%

Annual — 177.20K

Quarterly — 176.53K

Monthly — 87.10K

49.2%