## **Introduction**

Customer churn is a critical issue for telecommunications companies, impacting revenue and long-term customer retention. This analysis explores key factors influencing churn using a dataset of Telco customers. The goal is to identify trends and provide actionable insights to reduce customer attrition.

## **Data Overview**

The dataset contains information on 7,043 customers, including demographic details, service subscriptions, contract types, billing methods, and churn status. Key variables analyzed include:

* **Contract Type**: Month-to-month, One-year, Two-year
* **Charges**: Monthly and Total Charges
* **Tenure**: Length of customer subscription
* **Services**: Internet, Streaming, Phone, and Support Services
* **Demographics**: Gender, Senior Citizen, Dependents

## **Key Findings**

### **1. Contract Type and Churn**

A significant trend emerged: **customers with month-to-month contracts were more likely to churn compared to those with long-term contracts**.

* **Churn Rate by Contract Type**
  + Month-to-Month: **42% churn rate**
  + One-Year: **11% churn rate**
  + Two-Year: **3% churn rate**
* Customers on shorter contracts may feel less commitment and are more susceptible to leaving for competitors.

### **2. Impact of Tenure on Churn**

* **Newer customers (tenure < 12 months) have a significantly higher churn rate** than long-term customers.
* **Customers with tenure of 1-6 months are the most likely to leave**, indicating an issue with early retention.
* **Longer tenure correlates with higher retention rates**, suggesting that customers who stay for a year are less likely to churn.

### **3. Monthly Charges and Churn**

* **Higher monthly charges correlate with higher churn rates.** Customers paying above the median charge were more likely to leave.
* **Customers with lower monthly charges and bundled services exhibited better retention rates.**

### **4. Additional Factors Affecting Churn**

* **Paperless billing customers churn more** compared to those receiving paper bills.
* **Customers using electronic payment methods, especially automatic payments, tend to stay longer.**
* **Streaming services had minimal impact on churn**, meaning other service factors play a bigger role.

## **Recommendations**

1. **Incentivize Long-Term Contracts**
   1. Offer discounts or loyalty rewards to encourage customers to switch from month-to-month to annual contracts.
   2. Provide personalized offers for at-risk customers nearing the end of their billing cycle.
2. **Improve Early Customer Retention**
   1. Implement a structured onboarding program to increase engagement in the first 3-6 months.
   2. Proactively reach out to new customers to offer discounts, support, or exclusive deals.
3. **Reevaluate Pricing Structure**
   1. Consider bundling popular services to reduce high individual monthly charges.
   2. Offer tiered pricing models to cater to different customer needs.
4. **Enhance Customer Support and Engagement**
   1. Provide priority support for month-to-month contract customers.
   2. Use targeted messaging for customers with high churn risk (e.g., those with high bills, short tenure, or paperless billing).

## **Conclusion**

The analysis confirms that **contract type is a major driver of churn**, with month-to-month customers being the most likely to leave. Other factors such as tenure, pricing, and billing preferences also play a role. By addressing these issues through contract incentives, pricing adjustments, and proactive engagement, the company can significantly improve retention and reduce churn.