**Executive Summary: Telco Customer Churn Analysis**

The goal of this analysis was to understand patterns and factors contributing to customer churn in a telecom company. The dataset was cleaned and analyzed to draw insights into customer behavior and churn tendencies.

**1. Overall Churn Rate**

* **Churned Customers:** **26.5%** of the total customer base.
* **Retained Customers:** **73.5%**

This means roughly **1 in 4 customers** is leaving, which is a significant churn rate warranting intervention.

**2. Churn by Gender**

* **Male Churn Rate:** Approximately **26.2%**
* **Female Churn Rate:** Approximately **26.8%**

➡️ **Insight:** Gender does **not significantly influence churn**.

**3. Churn by Senior Citizen Status**

* **Senior Citizens:** Comprise **16%** of the dataset.
  + **Churn Rate among Seniors:** **41.7%**
* **Non-Senior Citizens Churn Rate:** **24.0%**

➡️ **Insight:** **Senior citizens are 74% more likely** to churn than non-seniors. Special attention and tailored plans for them may reduce churn.

**4. Impact of Tenure on Churn**

* Customers with **lower tenure (new users)** churn more frequently.
* **Longer tenure** customers are **more loyal**.

➡️ **Insight:** Loyalty grows over time. Improving early user experience can enhance retention.

**5. Churn by Contract Type**

* **Monthly Contracts:** **43.5%** churn rate
* **One-year Contracts:** **11.0%**
* **Two-year Contracts:** **2.9%**

➡️ **Insight:** Customers on **monthly contracts are 15 times more likely to churn** compared to those on 2-year contracts. Long-term contracts build stickiness.

**6. Churn by Internet Service**

* **Fiber Optic Users Churn Rate:** **41.5%**
* **DSL Users:** **19.7%**
* **No Internet Service:** **7.5%**

➡️ **Insight:** **Fiber optic users** exhibit the **highest churn**, possibly due to cost or service issues.

**7. Churn by Services Opted**

Customers **not subscribed** to value-added services have **significantly higher churn**:

| **Service** | **Churn Without Service** |
| --- | --- |
| Online Security | **49.2%** |
| Tech Support | **48.4%** |
| Online Backup | **44.5%** |
| Device Protection | **43.9%** |

➡️ **Insight:** Bundling these services may reduce churn.

**8. Total Charges and Monthly Charges**

* Churned customers tend to have **lower total charges** (due to shorter tenure) and **higher monthly charges**.

➡️ **Insight:** Reducing initial cost barriers or providing discounts for high monthly charge plans could help retain customers.

**Recommendations**

* Focus on **reducing churn among senior citizens and fiber optic users**.
* **Promote yearly contracts** with incentives.
* **Bundle value-added services** to increase stickiness.
* Improve **onboarding and early experience** to retain new customers.
* Re-evaluate pricing for high monthly charge plans.