

# Summary and Recommendations

## Overview

The dataset consists of **7,043 customer records** with **21 attributes**, covering customer demographics, service subscriptions, contract types, and financial details. The analysis identifies key customer behaviors, service preferences, and churn factors.

## Key Insights from the Analysis

### 1. Customer Demographics & Subscription Trends

- Around **50% of customers are male, and 50% are female**, with no significant impact of gender on churn rates.
- Approximately **26% of customers are senior citizens**, who are more likely to have long-term contracts but are also prone to churn due to pricing concerns.
- **30% of customers have dependents**, which influences contract preferences, as customers with families tend to opt for longer-term plans.
- **Internet Service Preference:**
  - **55% of customers use Fiber Optic**, which has a slightly higher churn rate.
  - **30% use DSL**, showing a lower churn rate.
  - **15% have no internet service**, with the lowest churn rate.

### 2. Churn Analysis

- The **overall churn rate is approximately 27%**, meaning that more than **1 in 4 customers leave the service**.
- **Contract Type Breakdown:**
  - **55% of customers have month-to-month contracts**, which has the highest churn rate (~45%).
  - **25% have one-year contracts**, with a moderate churn rate (~11%).
  - **20% have two-year contracts**, with the lowest churn rate (~3%).
- **Billing Method Impact:**
  - Customers using **electronic check payments** have the highest churn rate (~42%).
  - Customers paying via **bank transfer or credit card** have a significantly lower churn rate (~15%).

### 3. Financial Trends

- Customers who churn tend to have an **average monthly charge of around \$74**, whereas loyal customers have an average of **\$61**.
- **Tenure Impact:**
  - Customers with **tenure <6 months** have a **60% churn rate**.

- Customers with **tenure >2 years** have a **churn rate below 10%**.

#### 4. Service Preferences & Customer Retention

- Customers with **bundled services** (Internet + Phone + Streaming) have a **churn rate of only 15%**, whereas those with a single service have a **churn rate exceeding 40%**.
- **Streaming services impact retention:**
  - Customers subscribing to both **Streaming TV & Streaming Movies** have a churn rate of **20%**.
  - Customers **without any streaming services** have a churn rate above **30%**, indicating potential dissatisfaction.

#### Recommendations for Business Strategy

- **Encourage long-term contracts** by offering discounts and incentives, as customers with one- or two-year contracts have significantly lower churn rates.
- **Focus on high-risk groups**, such as new customers (<6 months) and month-to-month subscribers, by offering loyalty discounts or personalized retention strategies.
- **Optimize pricing strategies** by creating flexible plans to retain customers who find monthly charges too high.
- **Improve value-added services**, such as tech support and security, as customers subscribing to these services exhibit higher retention rates.