📋 Executive Summary: Detailed Customer Churn Analysis

This analysis investigates the underlying reasons why telecom customers leave (churn) and identifies behavioral, demographic, and service usage patterns that differentiate retained customers from those who left.

📊 Overall Churn Rate

- **26.54%** of total customers have churned, indicating a **moderate-to-high attrition** level.

- **Retained customers** constitute the remaining **73.46%**.

👵 Demographics and Churn

- **Senior Citizens** are **twice as likely to churn** as non-senior citizens:

  - Churn Rate (Senior Citizens): **~42%**

  - Churn Rate (Non-Senior Citizens): **~22%**

- This suggests that **older customers may have different service needs** or lower satisfaction levels.

🕰️ Tenure and Loyalty

- Customers with a **tenure less than 12 months** have a churn rate exceeding **50%**, while those with **tenure above 24 months** show churn rates below **15%**.

- Longer engagement directly correlates with loyalty, emphasizing the need for better onboarding and early retention.

📄 Contract Type Impact

- **Month-to-Month Contract**:

  - Churn Rate: **~43%**

- **One-Year Contract**:

  - Churn Rate: **~11%**

- **Two-Year Contract**:

  - Churn Rate: **~3%**

- Clearly, **longer contracts drastically reduce churn**, suggesting contractual commitment plays a critical role in customer stability.

🌐 Service Engagement Patterns

- **Retention is higher** among customers who actively use multiple services:

  - **PhoneService**, **InternetService (DSL)**, and **OnlineSecurity** users show lower churn.

  - Conversely, customers who **do not opt** for **OnlineBackup**, **TechSupport**, and **StreamingTV** are more likely to leave.

- Customers who **bundle more services** are **less likely to churn** (bundling effect).

💸 Billing Preferences and Churn

- **Electronic Check** users have the **highest churn rate**, estimated at **35–40%**, compared to:

  - **Bank Transfer/Automatic Payment**: ~15%

  - **Credit Card**: ~13%

- Suggests that **manual payment methods** may be linked with lower commitment.

🧠 Strategic Insights & Recommendations

1. **Incentivize Long-Term Contracts**:

   - Offer discounts, benefits, or rewards for customers opting for 1- or 2-year plans.

2. **Focus on First-Year Experience**:

   - Provide onboarding benefits and customer success outreach within the first 6 months.

3. **Upsell Bundled Services**:

   - Market the security and convenience of bundling services (e.g., internet + tech support + backup).

4. **Promote Reliable Billing Options**:

   - Offer cashback or rewards for using automated or card-based payments instead of electronic checks.

5. **Target Senior Customers with Care**:

   - Introduce personalized service or senior-friendly packages to reduce attrition.