CTA Summary and Recommendation

📊 **Executive Summary – Customer Churn Analysis (Telco Dataset)**

This analysis focuses on identifying the **key drivers of customer churn** within a telecom company. After cleaning and preparing the dataset (handling null values, formatting types, and relabeling categorical variables for clarity), we conducted a detailed churn behavior analysis across various customer service and demographic features.

📌 **Key Findings:**

1️⃣ **Overall Churn Rate**

- Out of the total customer base, **26.54% of customers have churned**, indicating that roughly **1 in 4 customers** discontinued the service.

2️⃣ **Senior Citizen vs. Non-Senior Citizen**

- **41.91%** of **Senior Citizens** have churned.

- In contrast, only **24.18%** of **Non-Senior Citizens** have churned.

- This suggests that senior customers are nearly **2× more likely** to leave than others, possibly due to affordability or lower perceived value.

3️⃣ **Tenure Analysis**

- Customers with **1–2 months tenure** have a churn rate of **60% or higher**.

- Conversely, customers who have stayed for **more than 2 years** have a churn rate of less than **10%**.

- This shows that **early retention strategies** are crucial to reducing churn.

4️⃣ **Contract Type**

- Churn rate by contract type:

    o **Month-to-Month**: **43.96%**

    o **One Year**: **11.3%**

    o **Two Year**: **2.77%**

- Clearly, **longer contracts** lead to significantly **lower churn**, possibly due to discounts and loyalty benefits.

5️⃣ **Payment Method**

- Customers using **Electronic Check** have the highest churn rate at **45.48%**.

- Those using **Credit Card** or **Bank Transfer (automatic)** have much lower churn rates (**16–19%**).

- This implies that **manual, friction-heavy payments** lead to a higher likelihood of churn.

6️⃣ **Internet Service Type**

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- **Fiber Optic** users churn at **42.68%**, while **DSL users** churn at **18.96%**.

- Interestingly, **customers with no internet service** have a churn rate of **7.57%** — they are less engaged but more stable (likely using phone services only).

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7 Tech Support & Security Services

- Churn is much higher among customers who **do not subscribe** to these services:

  - **Online Security**:

    - No = **41.77% churn**, Yes = **14.6%**

  - **Tech Support**:

    - No = **41.63%**, Yes = **14.97%**

  - **Device Protection**:

    - No = **39.12%**, Yes = **16.88%**

- These features play a strong role in **reducing churn risk**, likely by increasing customer satisfaction and reducing service-related complaints.

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8 Streaming Services

- Subscribing to **Streaming TV** or **Movies** does **not significantly reduce churn**:

  - StreamingTV Users: **30.07% churn**

  - Non-users: **24.45% churn**

- These services seem **non-essential**, meaning customers leave even if they have them — **core service performance matters more**.

🧠 Strategic Recommendations:

- Focus on retaining **new customers (1–2 months)** through onboarding and personalized offers.

- Promote **annual contracts** with discounts and loyalty programs.

- Encourage auto-pay methods like **bank transfer** or **credit card** to reduce friction.

- Upsell **OnlineSecurity**, **TechSupport**, and **DeviceProtection** — not as add-ons but as value-saving tools to reduce churn.

- Monitor **fiber optic customers** more closely; although it's a premium service, it's associated with higher churn, indicating possible dissatisfaction.