Summary And Recommendations

The analysis of the Telco Customer dataset (7,043 customers, 21 features) reveals an overall churn rate of about **26–27%**. Key patterns show that:

- **Internet Service type** is a major churn driver, with **Fiber Optic customers** having the highest churn (~42%) compared to DSL (~18%).

- Customers lacking **value-added services** (OnlineSecurity, TechSupport, OnlineBackup) show significantly higher churn (~40–45%) than subscribers (~15–20%).

- **Contract type and tenure** strongly impact retention: **Month-to-Month customers** churn at ~43%, while **1–2 year contract customers** churn less than 12%.

- **Billing and payment method** also influence churn. **Electronic check users** churn the most (~45%), while **auto-pay customers** churn the least (~15–20%).

- Higher **MonthlyCharges** (> $80) and shorter tenure (< 1 year) are associated with much higher churn rates.

📌 Overall, churn is concentrated among **short-tenure, fiber optic, month-to-month customers using electronic checks without support services**.

Recommendations

- **Promote Long-Term Contracts**

  - Encourage customers to switch from **Month-to-Month** to **1-year or 2-year contracts** through discounts, loyalty rewards, or bundled offers.

  - This could significantly reduce churn, as contract length is the strongest predictor of retention.

- **Encourage Auto-Pay Methods**

  - Provide incentives (e.g., cashback, small discounts) for customers to adopt **bank transfer or credit card auto-pay** instead of **electronic checks**, which have the highest churn rate.

- **Bundle Value-Added Services**

  - Integrate **OnlineSecurity, TechSupport, and OnlineBackup** with internet plans.

  - Customers using these services churn **~50% less**, so bundling them creates stickiness and improves loyalty.

- **Focus on Fiber Optic Customers**

  - Since **42% of Fiber Optic users churn**, investigate service quality, pricing concerns, and customer complaints.

  - Introduce special retention campaigns for this group.

- **Engage New Customers Early**

  - Churn is highest among **customers with tenure < 1 year**.

  - Offer welcome discounts, priority support, and personalized onboarding to strengthen relationships during this critical period.

- **Monitor High-Monthly-Charge Customers**

  - Customers paying **>$80/month** show higher churn.

  - Introduce **value-for-money bundles**, loyalty perks, or pricing flexibility to retain this high-revenue segment.

    -