**Executive Summary: Churn Analysis Project**

**Key Highlights**

1. Churn Overview:
   * Approximately 26.5% of customers have churned; 73.5% remained, consistent with original data.
2. Contract-Based Churn:
   * Churn among Month-to-Month customers remains highest (~43%).
   * Customers on One-Year or Two-Year contracts have lower churn (around 11–13%).
3. Service Usage Insights:
   * Customers not using Online Security, Tech Support, or Backup services have elevated churn.
   * Fiber optic service users exhibit the highest churn rate (~42%), indicating potential service dissatisfaction.
4. Demographic Influence:
   * Senior Citizens continue to show higher churn (~42%) vs. others (~24%).
   * No significant difference between genders in churn.
5. Technology & Service Combinations:
   * You've added subplot analysis across features like:
     + PhoneService, MultipleLines, Streaming Services, etc.
   * These visuals clearly illustrate how combinations of services influence churn.
6. Billing & Payment Trends:
   * Churn is highest (~45%) among users who pay via Electronic Check.
   * Those using automatic methods (Credit Card/Bank Transfer) churn less (~15–18%).
   * Customers with Paperless Billing churn more (~33%) than paper bill users (~17%).

### **Recommendations**

here are some data-driven strategies to reduce churn:

1. **Promote Long-Term Contracts**
   * Incentivize users on Month-to-Month contracts to switch to **annual or biennial plans** by offering discounts or bundled perks.
2. **Enhance Security & Support Services**
   * Encourage adoption of **OnlineSecurity**, **TechSupport**, and **DeviceProtection** through free trial campaigns or loyalty benefits.
3. **Target Senior Citizens with Tailored Support**
   * Develop specialized onboarding and retention programs for **Senior Citizens**, potentially including assisted setup or dedicated customer care.
4. **Discourage Use of Electronic Checks**
   * Offer **discounts or reward points** for switching to **automated payment methods**, which show higher retention.
5. **Paperless Billing Awareness**
   * Investigate why **Paperless Billing** correlates with higher churn; it may relate to missed communication or billing confusion.
6. **Focus on Fiber Optic Users**
   * Since **Fiber optic service users** show high churn, review the **quality, pricing, or customer experience** associated with this service type.