SUMMARY OF CUSTOMER CHURN DATA ANALYSIS

This project involves analyzing a telecom customer dataset to explore customer behavior and identify factors contributing to churn. The dataset contains **7,043 records** with **21 attributes** covering customer demographics, service usage, account information, and churn status.

**1. Demographic Information:**

* The dataset captures customer details such as gender, SeniorCitizen status, Partner, and Dependents.
* A significant portion of the customers do not have dependents, and senior citizens represent a smaller share of the customer base.

**2. Service Usage:**

* Customers subscribe to various telecom services including PhoneService, InternetService (DSL, Fiber optic), and additional services like OnlineSecurity, TechSupport, and DeviceProtection.
* Notably, customers using **Fiber optic** internet seem to have a higher churn rate compared to those using **DSL**.

**3. Tenure and Monthly Charges:**

* **Tenure** (the number of months a customer has stayed with the provider) is a key factor influencing churn. Customers with shorter tenures (1-2 months) are more likely to churn.
* **MonthlyCharges** vary significantly, with customers paying higher charges showing a higher likelihood of churn, indicating that pricing is a concern for many.

**4. Churn Behavior:**

* Churn is influenced by multiple factors, including tenure, monthly charges, and service quality. Customers with shorter tenure, higher monthly charges, and those using **Fiber optic** internet are more likely to leave.
* Payment method also plays a role: customers paying via **Electronic check** exhibit higher churn rates compared to those using automatic payment methods.

**Key Findings:**

* **Short-tenure customers** are at a higher risk of churning, suggesting that early customer experience is crucial.
* **High monthly charges** are linked to churn, indicating pricing dissatisfaction among certain customers.
* **Fiber optic users** tend to churn more, possibly due to service issues or cost.
* Payment methods like **Electronic check** are associated with higher churn rates, likely due to inconvenience.

**Recommendations to Improve Customer Retention:**

1. **Focus on Early Tenure Customers**:
   * Provide onboarding benefits or discounts to customers in the first 6 months to reduce early churn.
2. **Introduce Flexible Pricing**:
   * Implement tiered pricing plans to cater to customers with different service needs, especially for those with high monthly charges.
3. **Improve Fiber Optic Service Quality**:
   * Investigate issues related to Fiber optic services and take corrective measures to reduce dissatisfaction.
4. **Promote Automatic Payment Options**:
   * Encourage customers to switch to automatic payment methods by offering incentives, reducing churn associated with **Electronic check** payments.
5. **Loyalty Programs for Long-Tenure Customers**:
   * Reward long-tenure customers with loyalty bonuses or exclusive offers to encourage continued engagement.