**Customer Churn Analysis - Summary Report**

**1. Data Preprocessing**

* Loaded dataset: Customer Churn.csv.
* Cleaned and transformed data:
  + Replaced blank values in the TotalCharges column with 0.
  + Converted TotalCharges to float datatype.
  + Mapped SeniorCitizen values: 0 to "No" and 1 to "Yes".
* Confirmed there were no missing/null values in the dataset.

**2. Exploratory Data Analysis (EDA)**

**Customer Churn Overview**

* **Churn Count Plot**: Visualizes the number of customers who churned versus those who did not.
* **Churn Percentage Pie Chart**: Illustrates the proportion of churned customers.

**Demographic Insights**

* **Gender**: No significant difference in churn rates between male and female customers.
* **Senior Citizens**: A higher proportion of senior citizens have churned compared to non-seniors.

**Usage & Contract Patterns**

* **Tenure**:
  + Customers with shorter tenure are more likely to churn.
  + Customers with longer tenure tend to remain.
* **Contract Type**:
  + Monthly contracts are associated with higher churn rates.
  + Long-term contracts (yearly or more) show lower churn rates and better customer retention.

**3. Key Insights**

* Higher churn rates are seen among:
  + Customers with **monthly contracts**.
  + Customers with **shorter tenure**.
  + **Senior citizens**.
* **Gender** does not significantly affect churn behavior.

**Conclusion**: To reduce churn, companies should consider promoting long-term contracts, enhancing engagement early in the customer lifecycle, and providing targeted support to senior customers.