```
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns

# Load the dataset
data = pd.read_csv('Customers.csv')

# Exploratory Data Analysis
print(data.head())
print(data.info())
print(data.describe())

# Check for missing values
print(data.isnull().sum())

# Visualizations
1. Customer Distribution by Region
plt.figure(figsize=(10, 6))
sns.countplot(x='Region', data=data)
plt.title('Customer Distribution by Region')
plt.xlabel('Region')
plt.ylabel('Number of Customers')
plt.show()

 2. Customer Signup Trend Over Time
data['SignupDate'] = pd.to_datetime(data['SignupDate'])
plt.figure(figsize=(10, 6))
```

```
sns.lineplot(x='SignupDate', y=data.index, data=data)
plt.title('Customer Signup Trend Over Time')
plt.xlabel('Signup Date')
plt.ylabel('Number of Customers')
plt.show()
```

3. Customer Growth Rate

```
data['Month'] = data['SignupDate'].dt.month
monthly_counts = data.groupby('Month')['CustomerID'].count()
plt.figure(figsize=(10, 6))
plt.plot(monthly_counts.index, monthly_counts)
plt.title('Monthly Customer Growth')
plt.xlabel('Month')
plt.ylabel('Number of Customers')
plt.show()
```

4. Distribution of Signup Dates

```
plt.figure(figsize=(10, 6))
sns.histplot(data['SignupDate'])
plt.title('Distribution of Signup Dates')
plt.xlabel('Signup Date')
plt.ylabel('Frequency')
plt.show()
```

5. Customer Distribution by Signup Day of Week

```
data['DayOfWeek'] = data['SignupDate'].dt.day_name()
plt.figure(figsize=(10, 6))
```

```
sns.countplot(x='DayOfWeek', data=data, order=calendar.day_name)
plt.title('Customer Distribution by Signup Day of Week')
plt.xlabel('Day of Week')
plt.ylabel('Number of Customers')
plt.show()
```