

```
import matplotlib.pyplot as plt
```

```
import seaborn as sns
```

```
plt.figure(figsize=(15, 10))
```

```
numerical_features = ['CreditScore', 'Age', 'Tenure', 'Balance', 'NumOfProducts', 'EstimatedSalary']
```

```
for i, col in enumerate(numerical_features):
```

```
    plt.subplot(2, 3, i + 1)
```

```
    plt.hist(df[col], bins=20, color='skyblue', edgecolor='black')
```

```
    plt.title(f'Distribution of {col}')
```

```
    plt.xlabel(col)
```

```
    plt.ylabel('Frequency')
```

```
plt.tight_layout()
```

```
plt.show()
```

```
plt.figure(figsize=(15, 6))
```

```
for i, col in enumerate(numerical_features):
```

```
    plt.subplot(2, 3, i + 1)
```

```
    sns.boxplot(y=df[col], color='lightgreen')
```

```
    plt.title(f'Box plot of {col}')
```

```
plt.tight_layout()
```

```
plt.show()
```

```
plt.figure(figsize=(12, 6))
```

```
plt.subplot(1, 2, 1)
```

```
sns.scatterplot(x='Age', y='Balance', hue='Exited', data=df, palette='viridis')
```

```
plt.title('Age vs. Balance (Colored by Exited)')
```

```
plt.subplot(1, 2, 2)
```

```
sns.scatterplot(x='EstimatedSalary', y='Balance', hue='Exited', data=df, palette='viridis')
```

```
plt.title('EstimatedSalary vs. Balance (Colored by Exited)')
```

```
plt.tight_layout()
```

```
plt.show()
```

```
plt.figure(figsize=(8, 6))  
df.groupby('Geography')['Exited'].mean().plot(kind='bar', color='coral')  
plt.title('Churn Rate by Geography')  
plt.ylabel('Churn Rate')  
plt.show()
```

```
age_groups = pd.cut(df['Age'], bins=range(0, 101, 10), right=False)  
plt.figure(figsize=(10, 6))  
df.groupby(age_groups)['Exited'].mean().plot(kind='bar', color='lightcoral')  
plt.title('Churn Rate by Age Group')  
plt.xlabel('Age Group')  
plt.ylabel('Churn Rate')  
plt.show()
```

```
plt.figure(figsize=(6, 5))  
df.groupby('Gender')['Exited'].mean().plot(kind='bar', color='plum')  
plt.title('Churn Rate by Gender')  
plt.ylabel('Churn Rate')  
plt.show()
```