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# Importing necessary libraries

import pandas as pd

import numpy as np

import matplotlib.pyplot as plt

import seaborn as sns

# Creating a fictional dataset

data = {
    'Age': np.random.randint(18, 65, 100),
    'Income': np.random.normal(50000, 10000, 100),
    'Gender': np.random.choice(['Male', 'Female'], 100),
    'Education': np.random.choice(['High School', 'Bachelor', 'Master', 'PhD'], 100),
    'Country': np.random.choice(['USA', 'UK', 'Canada', 'Germany'], 100)
}

df = pd.DataFrame(data)

# Displaying the first few rows of the dataset

print(df.head())

# Summary statistics

print(df.describe())

# Histogram of Age

plt.figure(figsize=(8, 6))
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sns.histplot(df['Age'], kde=True)
plt.title('Distribution of Age')
plt.xlabel('Age')
plt.ylabel('Frequency')
plt.show()
```

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# Boxplot of Income
plt.figure(figsize=(8, 6))
sns.boxplot(x='Income', data=df)
plt.title('Boxplot of Income')
plt.xlabel('Income')
plt.show()
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# Count plot of Gender
plt.figure(figsize=(8, 6))
sns.countplot(x='Gender', data=df)
plt.title('Count of Gender')
plt.xlabel('Gender')
plt.ylabel('Count')
plt.show()
```

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# Pairplot of numerical variables
sns.pairplot(df[['Age', 'Income']])
plt.show()
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# Correlation heatmap
plt.figure(figsize=(8, 6))
sns.heatmap(df.corr(), annot=True, cmap='coolwarm')
plt.title('Correlation Heatmap')
plt.show()
```