

A step by step guide:

Import Libraries: Start by importing the necessary libraries:

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

Load Data: Load your dataset into a Pandas Data Frame:

```
df = pd.read_csv('your_dataset.csv')
```

Initial Exploration: Get an overview of the dataset:

```
print(df.head()) # View the first few rows  
print(df.info()) # View data types and missing  
values print(df.describe()) # Summary statistics
```

Data Cleaning: Handle missing values, duplicates, and outliers:

```
# Handling missing values
```

```
df.dropna(inplace=True)
```

```
# Handling duplicates
```

```
df.drop_duplicates(inplace=True)
```

```
# Handling outliers
```

```
# Use domain knowledge or statistical methods to identify and deal with outliers
```

Data Visualization: Use Matplotlib and Seaborn to create visualizations:

**# Example**

**visualizations #**

**Histogram**

```
plt.figure(figsize=(10,
6))
sns.histplot(df['column_name'], bins=20,
kde=True) plt.title('Histogram of Column')
plt.xlabel('Values')
plt.ylabel('Frequency')
plt.show()
```

**# Scatter plot**

```
plt.figure(figsize=(10, 6))
sns.scatterplot(x='column1', y='column2',
data=df) plt.title('Scatter Plot')
plt.xlabel('Column 1')
plt.ylabel('Column 2')
plt.show()
```

**# Box plot**

```
plt.figure(figsize=(10,
6))
sns.boxplot(x='column', y='target_column',
data=df) plt.title('Box Plot')
plt.xlabel('Column')
plt.ylabel('Target Column')
plt.show()
```

**# Pairplot**

```
sns.pairplot(df)
plt.show()
```