**#the pro..**

**import pandas as pd**

**# Install openpyxl if you haven't already**

**!pip install openpyxl**

**try:**

**df = pd.read\_excel('/content/Supply\_Chain\_Data.xlsx')**

**print(df.head()) # Print the first few rows to verify**

**except FileNotFoundError:**

**print("Error: File not found. Please check the file path.")**

**except Exception as e:**

**print(f"An error occurred: {e}")**

**import pandas as pd**

**import matplotlib.pyplot as plt**

**import seaborn as sns**

**# Load the dataset**

**file\_path = '/content/Supply\_Chain\_Data.xlsx'**

**df = pd.read\_excel(file\_path, engine='openpyxl')**

**# Convert date columns to datetime**

**for col in ['Order Date', 'Delivery Date']:**

**df[col] = pd.to\_datetime(df[col])**

**# 1. Descriptive Statistics**

**print("Descriptive Statistics:")**

**print(df[['Quantity', 'Unit Price', 'Total Price']].describe())**

**# 2. Correlation Analysis**

**correlation = df[['Quantity', 'Unit Price', 'Total Price']].corr()**

**print("\nCorrelation Matrix:")**

**print(correlation)**

**# 3. Visualization**

**plt.figure(figsize=(15, 8))**

**# a) Product Category Distribution**

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

**df['Product Category'].value\_counts().plot(kind='bar', color='skyblue', edgecolor='black')**

**plt.title('Product Category Distribution')**

**plt.ylabel('Count')**

**plt.xticks(rotation=45)**

**# b) Total Price Over Time**

**plt.subplot(2, 2, 2)**

**df.groupby('Order Date')['Total Price'].sum().plot(color='green', marker='o')**

**plt.title('Total Price Over Time')**

**plt.ylabel('Total Price')**

**plt.xlabel('Order Date')**

**# c) Delivery Performance (Days to Deliver)**

**df['Delivery Time (Days)'] = (df['Delivery Date'] - df['Order Date']).dt.days**

**plt.subplot(2, 2, 3)**

**sns.histplot(df['Delivery Time (Days)'], bins=20, kde=True, color='orange')**

**plt.title('Delivery Time Distribution')**

**plt.xlabel('Days')**

**# d) Correlation Heatmap**

**plt.subplot(2, 2, 4)**

**sns.heatmap(correlation, annot=True, cmap='coolwarm', linewidths=0.5)**

**plt.title('Correlation Heatmap')**

**plt.tight\_layout()**

**plt.show()**

**# Save insights to Excel for review**

**df.to\_excel('/content/Supply\_Chain\_Insights.xlsx', index=False, engine='openpyxl')**