pip show pandas

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import pandas as pd

import numpy as np

import matplotlib.pyplot as plt

import seaborn as sns

sns.set(style='whitegrid’)

%matplotlib inline

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df = pd.read\_csv(r'C:\Users\DELL 5480\Downloads\retail\_sales\_dataset.csv’)

df.head()

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df.info()

df.isnull().sum()

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df['Date'] = pd.to\_datetime(df['Date'], errors='coerce’)

df['Month'] = df['Date'].dt.to\_period('M’)

df['Year'] = df['Date'].dt.year

df.head()

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print("Total Revenue: ₹", df['Total Amount'].sum())

print("Total Orders:", len(df))

print("Unique Customers:", df['Customer ID'].nunique())

print("Product Categories:", df['Product Category'].nunique())

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monthly\_sales = df.groupby('Month')['Total Amount'].sum().reset\_index()

monthly\_sales['Month'] = monthly\_sales['Month'].astype(str)

plt.figure(figsize=(10, 5))

sns.lineplot(data=monthly\_sales, x='Month', y='Total Amount', marker='o’)

plt.title('Monthly Revenue Trend’)

plt.xlabel("Month")

plt.ylabel("Total Revenue (₹)")

plt.xticks(rotation=45)

plt.tight\_layout()

plt.show()

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category\_sales = df.groupby('Product Category')['Total Amount'].sum().sort\_values()

plt.figure(figsize=(8, 5))

category\_sales.plot(kind='barh', color='lightgreen’)

plt.title("Revenue by Product Category")

plt.xlabel("Revenue (₹)")

plt.tight\_layout()

plt.show()

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top\_customers = df.groupby('Customer ID')['TotalAmount'].sum().sort\_values(ascending=False).head(10)

plt.figure(figsize=(8, 4))

top\_customers.plot(kind='bar', color='tomato’)

plt.title("Top 10 Customers by Revenue")

plt.xlabel("Customer ID")

plt.ylabel("Revenue (₹)")

plt.tight\_layout()

plt.show()