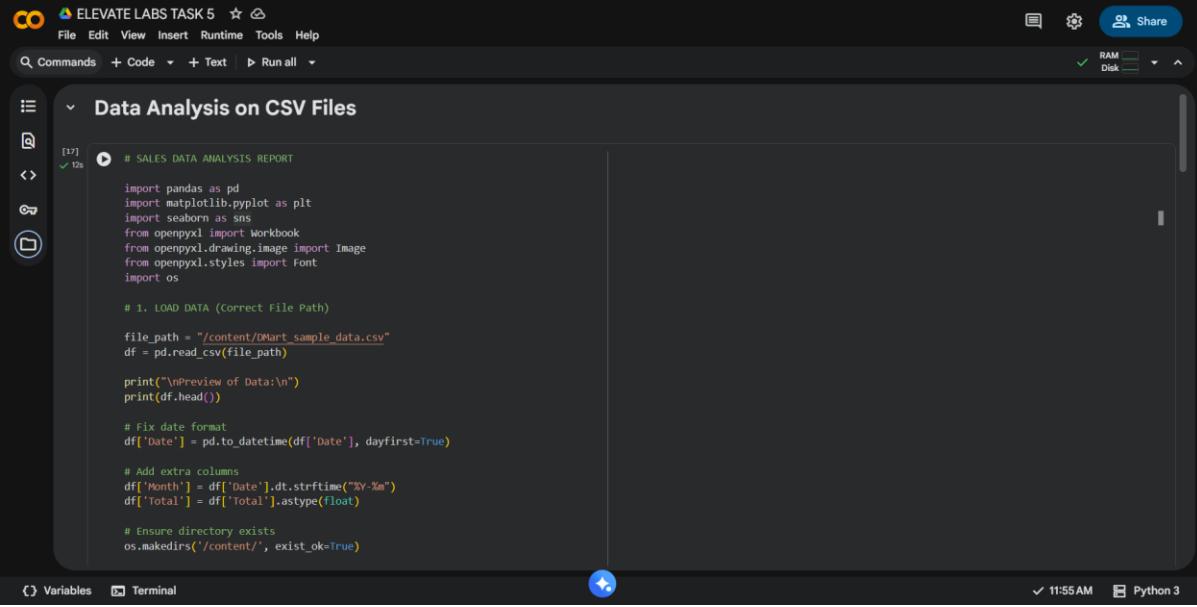


SCREENSHOTS



The screenshot shows a Jupyter Notebook interface titled "Data Analysis on CSV Files". The code cell contains Python code for loading a CSV file, fixing date formats, adding extra columns, and ensuring directory exists.

```
# SALES DATA ANALYSIS REPORT
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
from openpyxl import Workbook
from openpyxl.drawing.image import Image
from openpyxl.styles import Font
import os

# 1. LOAD DATA (Correct File Path)
file_path = "/content/DMart_sample_data.csv"
df = pd.read_csv(file_path)

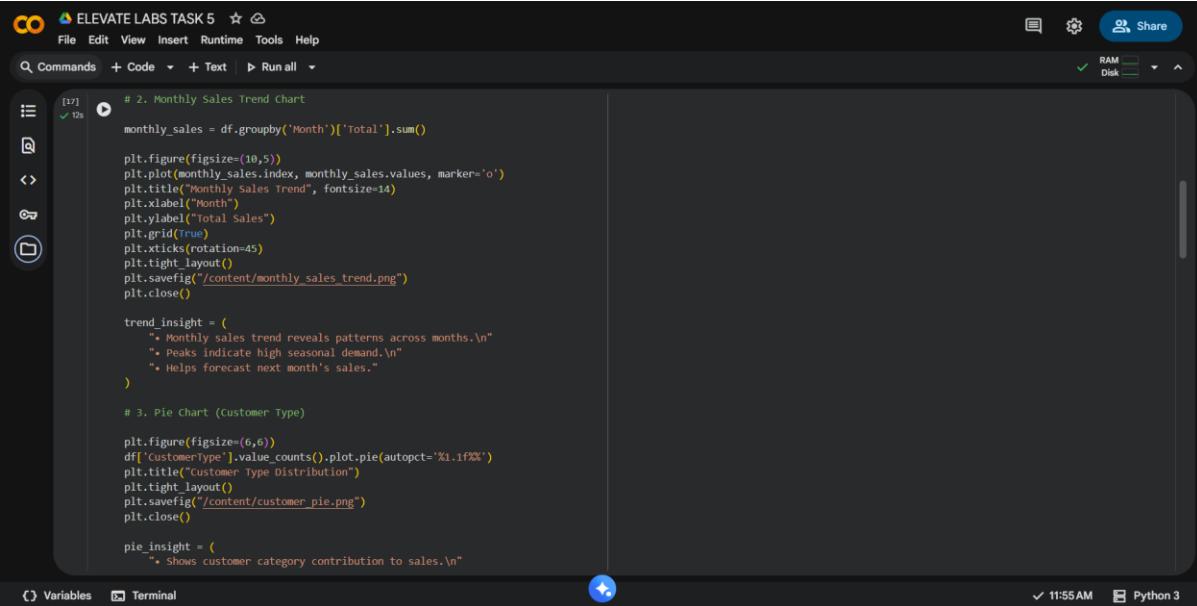
print("\nPreview of Data:\n")
print(df.head())

# Fix date format
df['Date'] = pd.to_datetime(df['Date'], dayfirst=True)

# Add extra columns
df['Month'] = df['Date'].dt.strftime("%Y-%m")
df['Total'] = df['Total'].astype(float)

# Ensure directory exists
os.makedirs('/content/', exist_ok=True)
```

Variables Terminal 11:55 AM Python 3



The screenshot shows a Jupyter Notebook interface titled "# 2. Monthly Sales Trend chart". The code cell contains Python code for creating a line chart of monthly sales.

```
monthly_sales = df.groupby('Month')['Total'].sum()

plt.figure(figsize=(10,5))
plt.plot(monthly_sales.index, monthly_sales.values, marker='o')
plt.title("Monthly Sales Trend", fontsize=14)
plt.xlabel("Month")
plt.ylabel("Total Sales")
plt.grid(True)
plt.xticks(rotation=45)
plt.tight_layout()
plt.savefig("/content/monthly_sales_trend.png")
plt.close()

trend_insight = (
    "-> Monthly sales trend reveals patterns across months.\n"
    "  - Peaks indicate high seasonal demand.\n"
    "  - Helps forecast next month's sales."
)
```

Variables Terminal 11:55 AM Python 3

ELEVATE LABS TASK 5

```
[12] File Edit View Insert Runtime Tools Help
Commands + Code + Text Run all
12s
    "# Helps identify dominant customer groups."
)
# 4. Heatmap (Category vs Month)

pivot_table = df.pivot_table(
    values='Total',
    index='ProductCategory',
    columns='Month',
    aggfunc='sum',
    fill_value=0
)

plt.figure(figsize=(12,6))
sns.heatmap(pivot_table, cmap="Blues", annot=False)
plt.title("Sales Heatmap (Category vs Month)")
plt.tight_layout()
plt.savefig("./content/sales_heatmap.png")
plt.close()

heatmap_insight = (
    "# Darker shades = higher sales.\n"
    "# Highlights monthly trends for each product category."
)

# 5. Sorted Bar Chart - Highest Sales Category

category_sales = df.groupby('ProductCategory')['Total'].sum().sort_values(ascending=False)

plt.figure(figsize=(8,5))
category_sales.plot(kind='bar')
plt.title("Top Product Categories by Sales")
Variables Terminal
11:55 AM Python 3
```

ELEVATE LABS TASK 5

```
[12] File Edit View Insert Runtime Tools Help
Commands + Code + Text Run all
12s
    plt.title("Top Product Categories by Sales")
    plt.xlabel("Product Category")
    plt.ylabel("Total Sales")
    plt.grid(True)
    plt.tight_layout()
    plt.savefig("./content/category_bar_sorted.png")
    plt.close()

    bar_insight = (
        "# Categories ranked based on total earnings.\n"
        "# Helps prioritize high-revenue products."
    )

# 6. CREATE EXCEL REPORT (One Sheet)

wb = workbook()
ws = wb.active
ws.title = "Sales Report"

ws["A1"] = "Sales Data Visualization Report"
ws["A1"].font = Font(size=16, bold=True)

# Insert Trend Chart
ws["A3"] = "1. Monthly Sales Trend"
ws.add_image(Image("./content/monthly_sales_trend.png"), "A5")
ws["A25"] = trend_insight

# Insert Pie Chart
ws["A30"] = "2. Customer Type Distribution"
ws.add_image(Image("./content/customer_pie.png"), "A32")
ws["A52"] = pie_insight

Variables Terminal
11:55 AM Python 3
```

ELEVATE LABS TASK 5

```
[12] File Edit View Insert Runtime Tools Help
Commands + Code + Text Run all
12s
    wb = workbook()
    ws = wb.active
    ws.title = "Sales Report"

    ws["A1"] = "Sales Data Visualization Report"
    ws["A1"].font = Font(size=16, bold=True)

    # Insert Trend Chart
    ws["A3"] = "1. Monthly Sales Trend"
    ws.add_image(Image("./content/monthly_sales_trend.png"), "A5")
    ws["A25"] = trend_insight

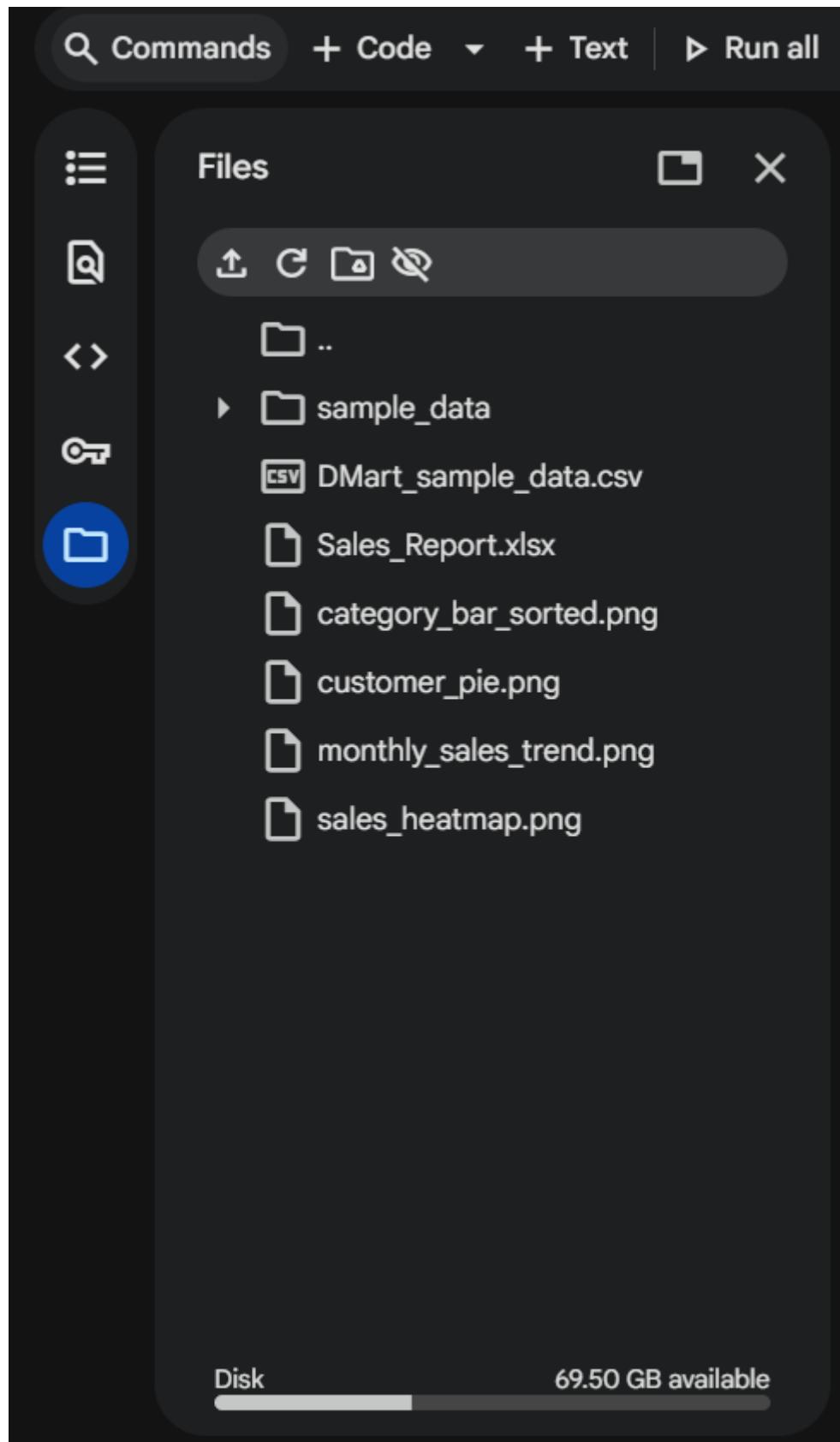
    # Insert Pie Chart
    ws["A30"] = "2. Customer Type Distribution"
    ws.add_image(Image("./content/customer_pie.png"), "A32")
    ws["A52"] = pie_insight

    # Insert Heatmap
    ws["A57"] = "3. Sales Heatmap (Category vs Month)"
    ws.add_image(Image("./content/sales_heatmap.png"), "A59")
    ws["A60"] = heatmap_insight

    # Insert Bar Chart
    ws["A95"] = "4. Top Selling Categories"
    ws.add_image(Image("./content/category_bar_sorted.png"), "A97")
    ws["A125"] = bar_insight

output_file = "/content/Sales_Report.xlsx"
wb.save(output_file)
output_file
Variables Terminal
11:55 AM Python 3
```

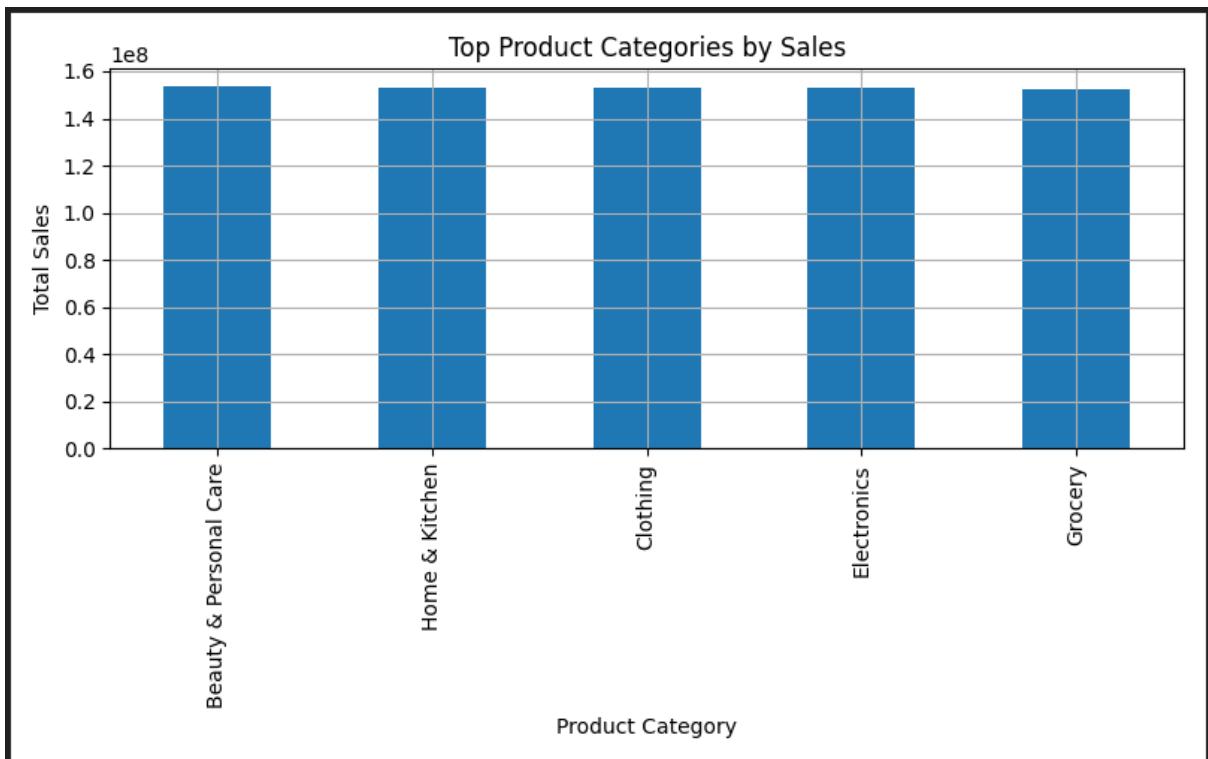
FILES



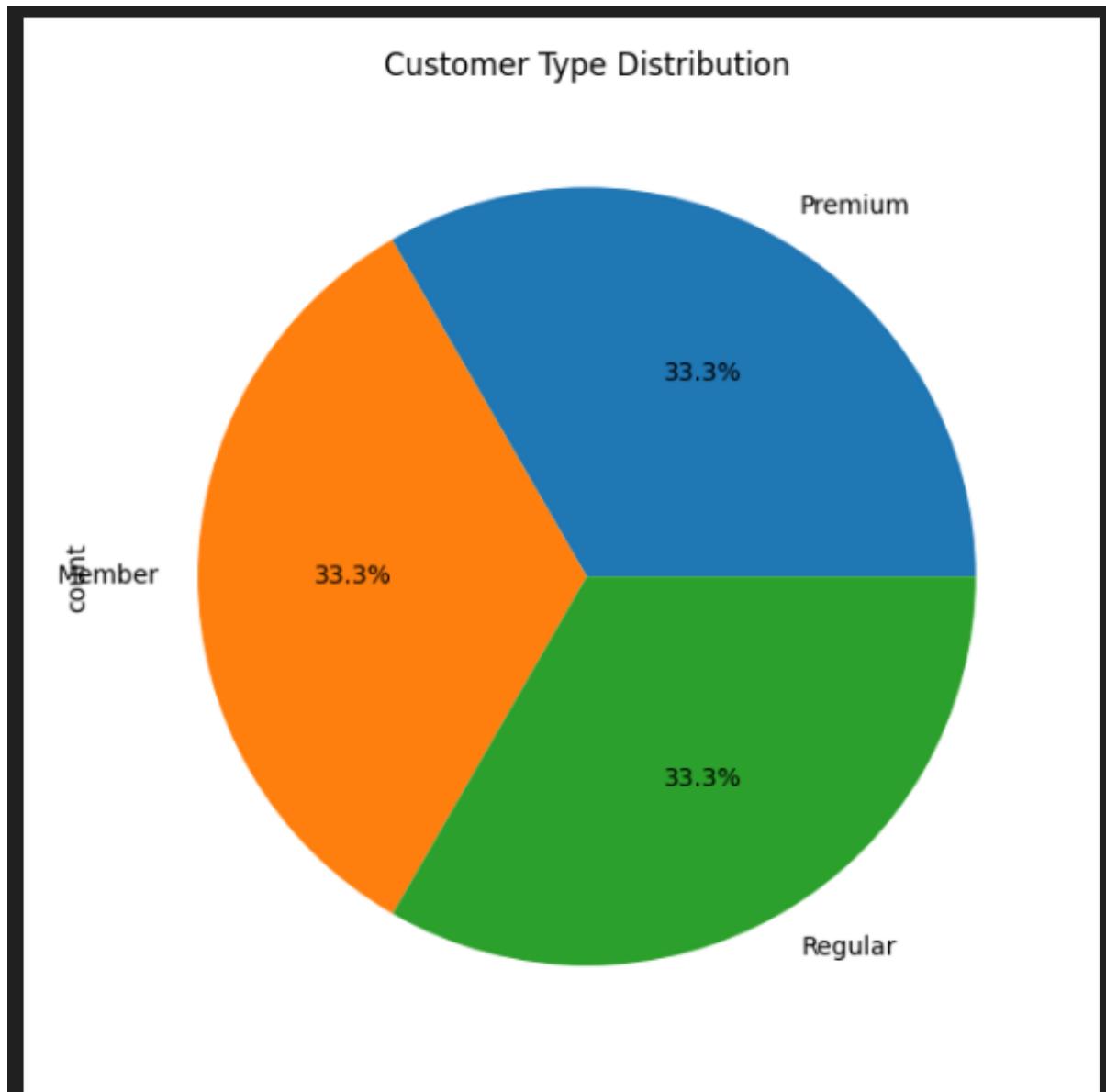
OUTPUT: -

The screenshot shows a Jupyter Notebook interface with a dark theme. On the left, there's a file browser window titled 'Files' containing files like 'sample_data.csv', 'Sales_Report.xlsx', and various image files. The main area displays a preview of a CSV file with columns: Date, Time, CustomerType, ProductCategory, UnitPrice, Quantity, Total, and FullName. The preview shows five rows of data. Below the preview, a large 'THANK YOU' message is centered. The bottom status bar shows '11:55 AM' and 'Python 3'.

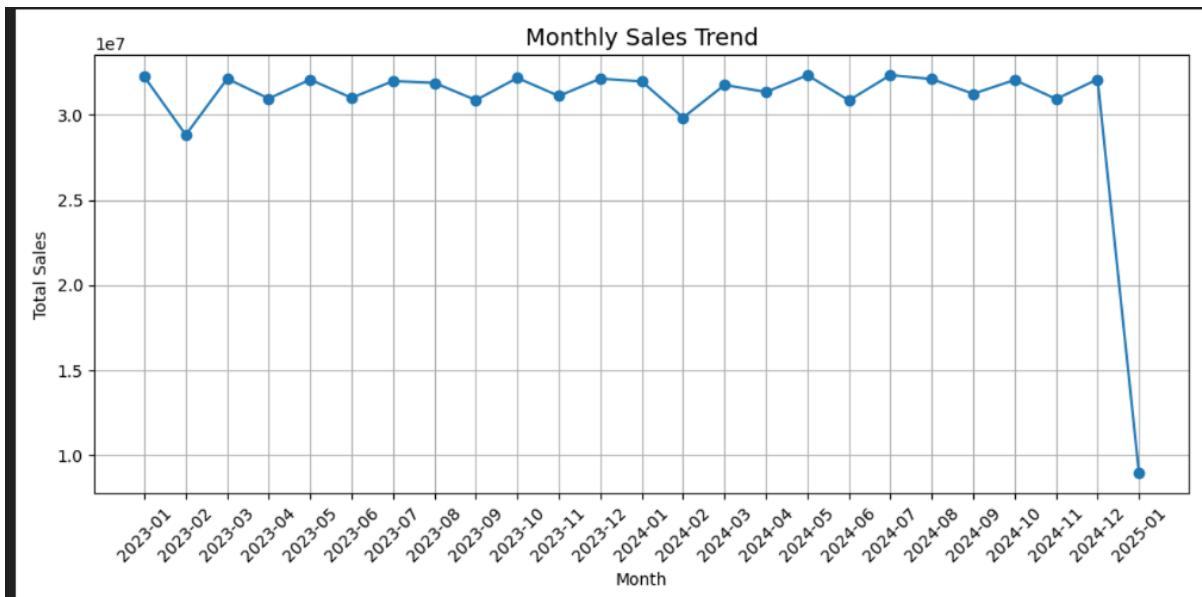
/content/category_bar_sorted.png



/content/customer_pie.png



/content/monthly_sales_trend.png



/content/sales_heatmap.png

