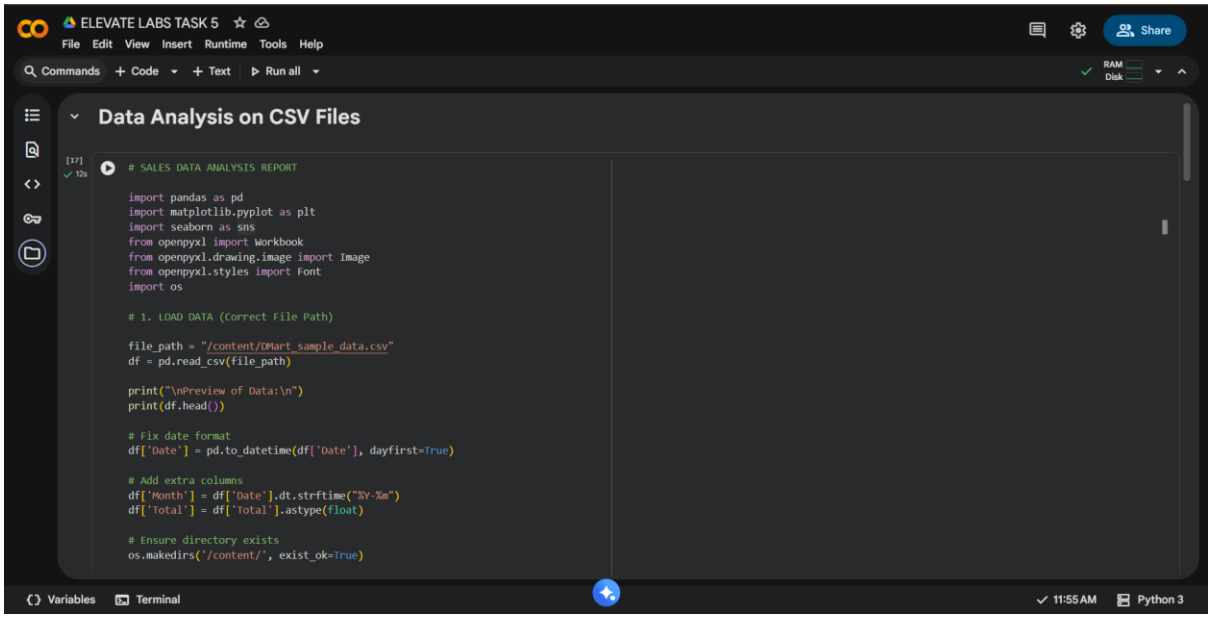
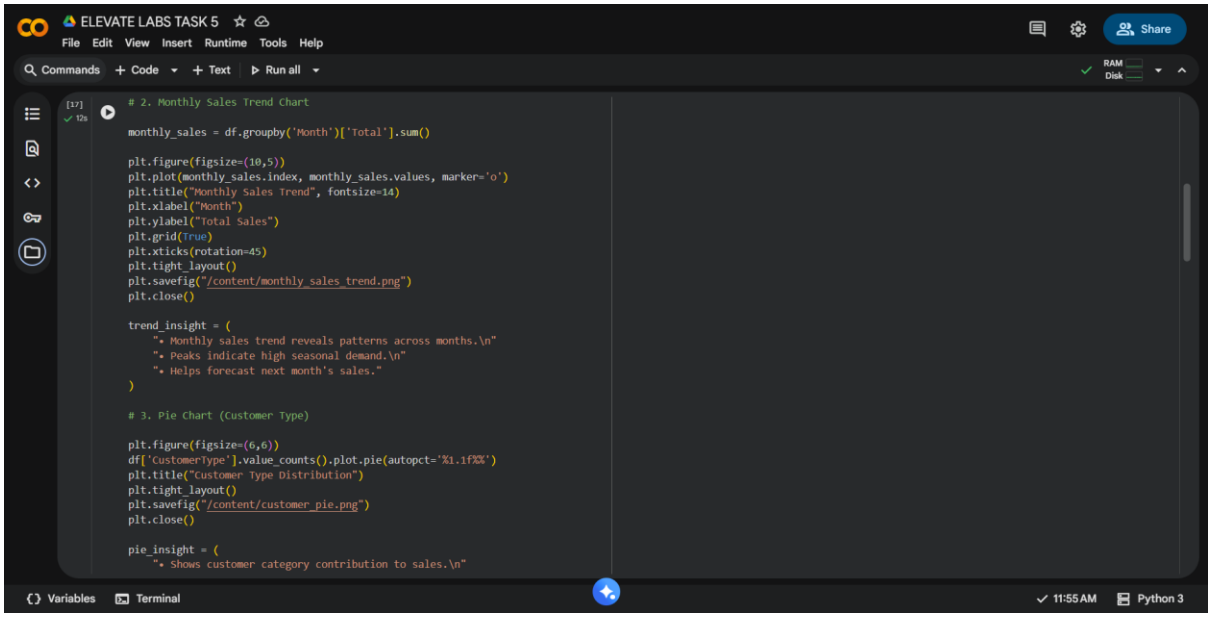
SCREENSHOTS





ELEVATE LABS TASK 5

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```
    "• 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

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```
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

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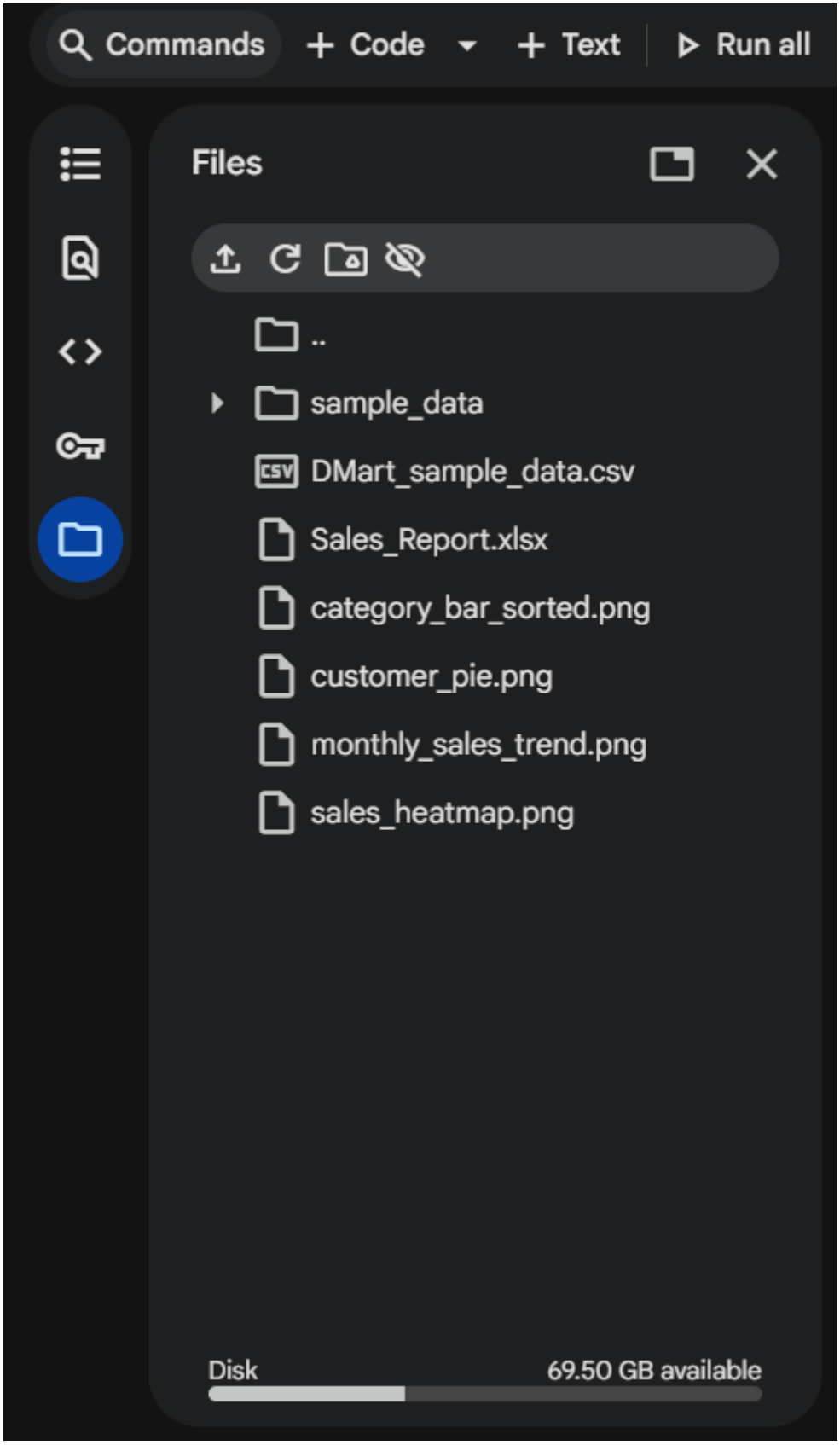
Commands + Code + Text Run all

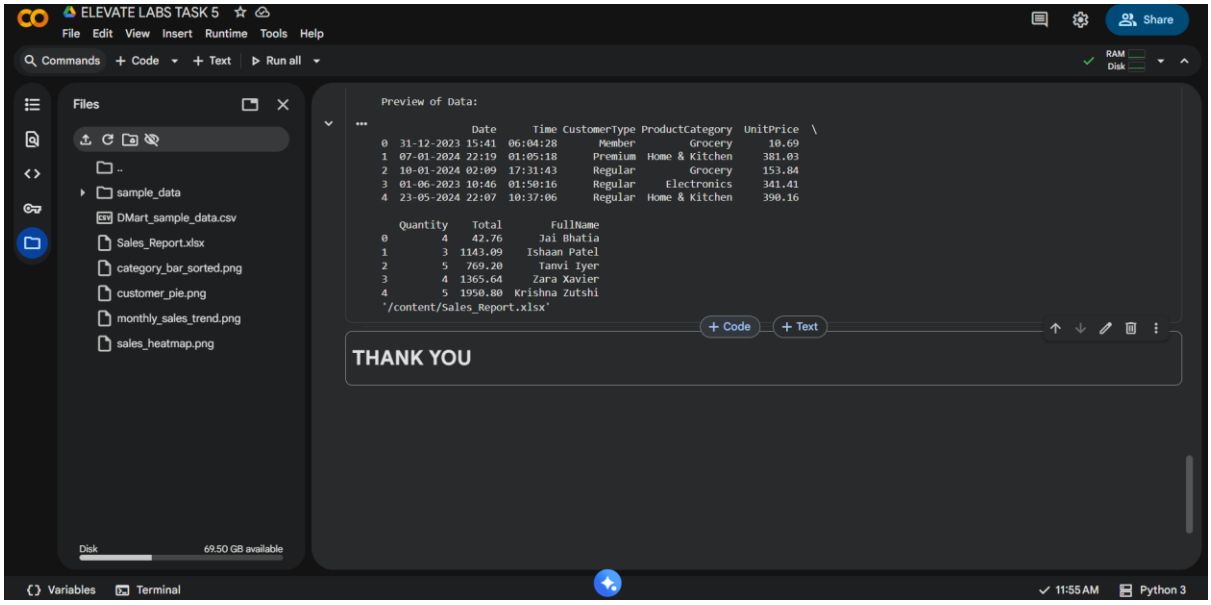
```
wb = Workbook()
ws = wb.active
ws.title = "Sales Report"

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["A90"] = 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

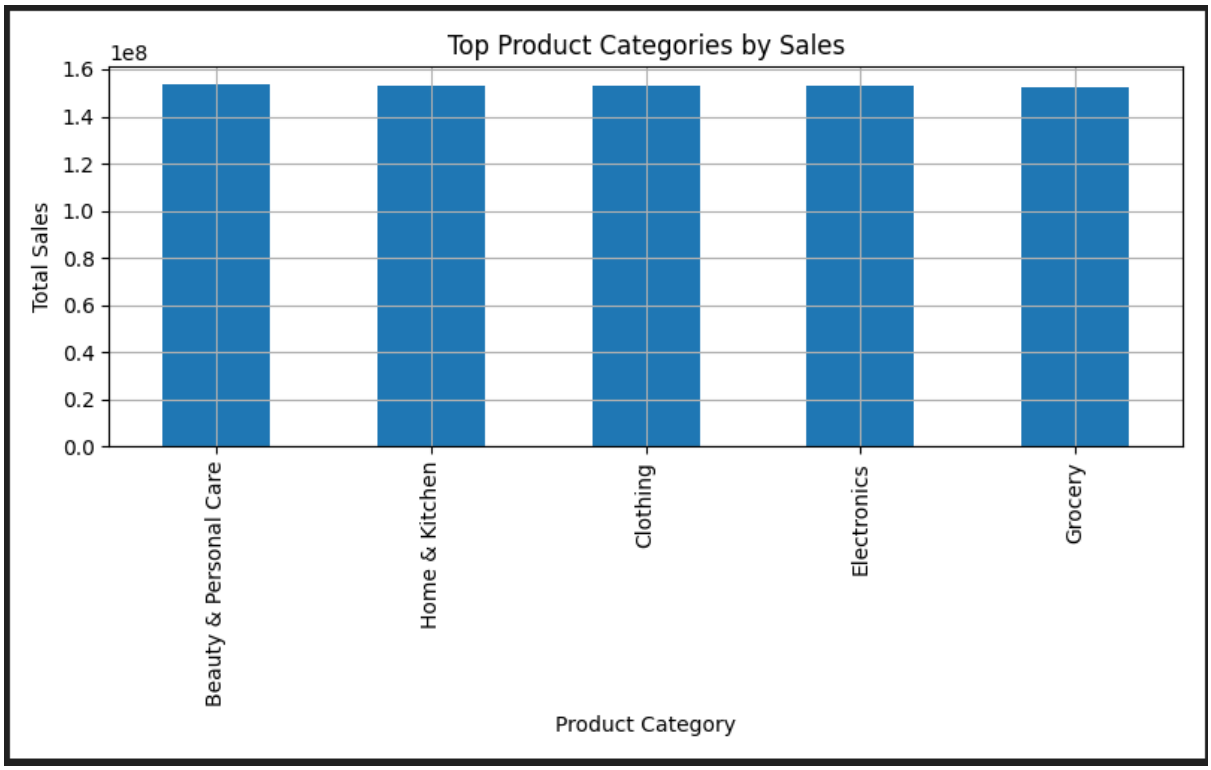
FILES


Commands
+ Code
+ Text
Run all
Files
..
sample_data
DMart_sample_data.csv
Sales_Report.xlsx
category_bar_sorted.png
customer_pie.png
monthly_sales_trend.png
sales_heatmap.png
Disk
69.50 GB available

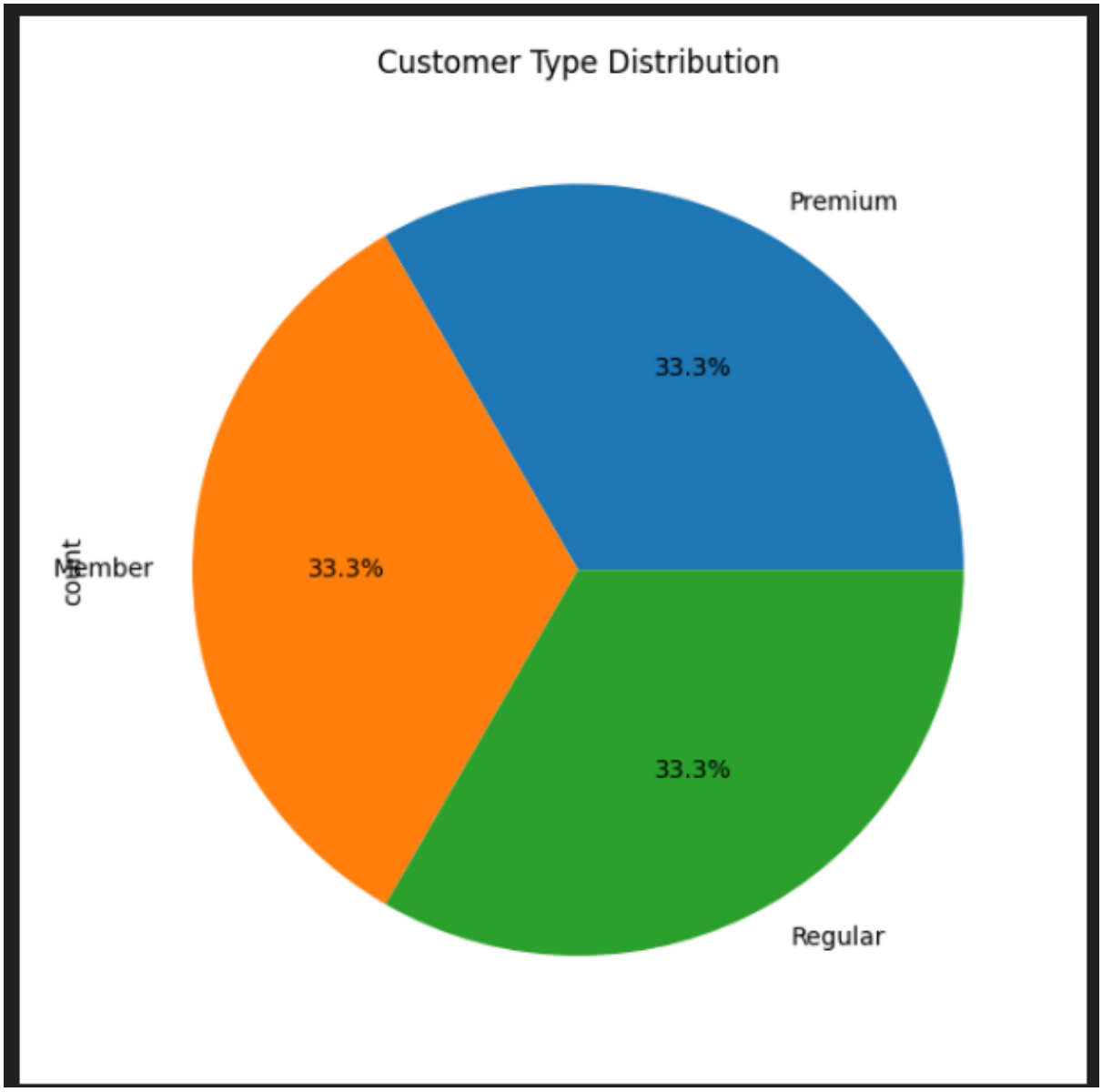
OUTPUT: -



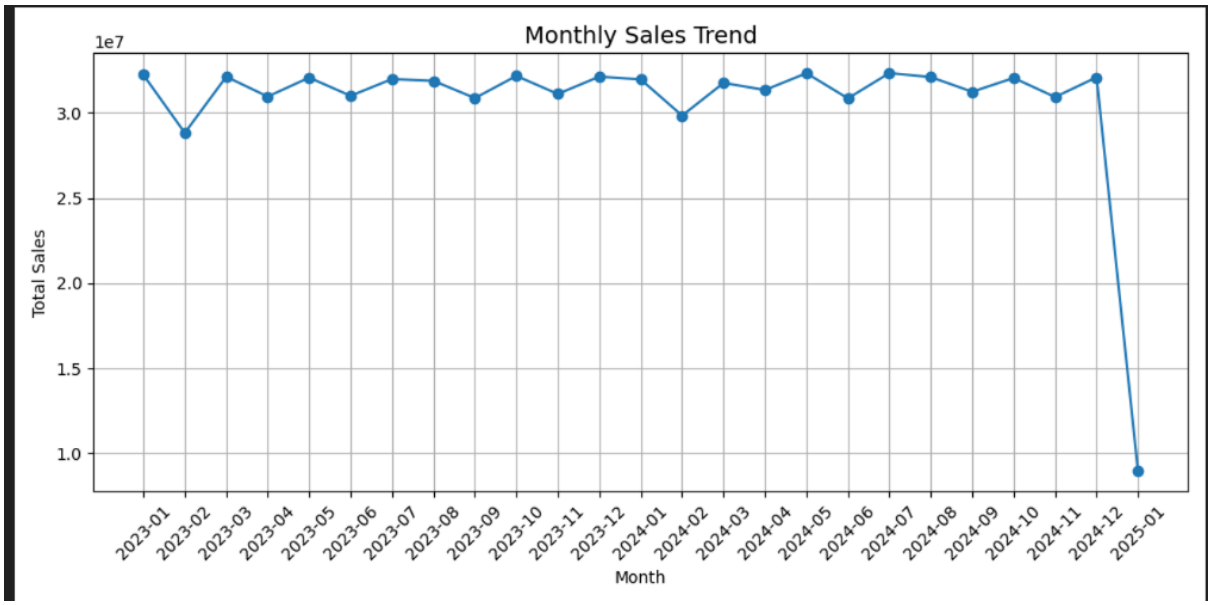
/content/category_bar_sorted.png



/content/customer_pie.png



/content/monthly_sales_trend.png



/content/sales_heatmap.png