

1) Identify missing values and duplicates in the Sales dataset.

The screenshot shows the Microsoft Power Query Editor interface. On the left, there is a list of queries: Date_Table, Customer_Segments, Regions, Products, and Sales_Transactions. The Sales_Transactions query is currently selected. The main area displays a table with two columns: Order_ID and Count. A summary bar at the top of the table shows the following distribution:

Type	Percentage
Valid	100%
Error	0%
Empty	0%

The table contains 180 rows, each representing an Order_ID from ORD00001 to ORD00029. The 'Count' column shows that every row has a value of 2. The bottom right corner of the window indicates 'PREVIEW DOWNLOADED AT 14:07' and the date '07-02-2026'. The taskbar at the bottom shows various application icons.

2) Univariate analysis on Sales and Profit

The screenshot shows the Microsoft Power BI Desktop interface. The ribbon at the top includes File, Home, Insert, Modeling, View, Optimize, and Help. The main workspace displays a dashboard with four visualizations:

- A bar chart titled "Profit Distribution" showing the sum of profit for various Order_IDs. The highest value is 2.7K.
- A histogram titled "Sales Amount Distribution" showing the count of Order_IDs versus Sales_Amount. The total sales amount is 282.13K.
- A card displaying the "Sum of Sales_Amount" as 282.13K.
- A card displaying the "Min of Sales_Amount" as 26.97.
- A card displaying the "Max of Sales_Amount" as 9.09K.
- A card displaying the "Average of Sales_Amount" as 1.57K.

The right side of the screen features the "Data" pane, which lists the available data fields under the Sales_Transactions query, such as Order_ID, Avg_Profit, Avg_Sales, Discount, Max_Profit, Max_Sales, Min_Profit, Min_Sales, Order_Date, Product_ID, Profit, Profit_Margin, Quantity, Region_ID, Sales_Amount, Segment_ID, Shipping_Cost, Total_Cost, and Unit_Cost. The taskbar at the bottom shows various application icons.

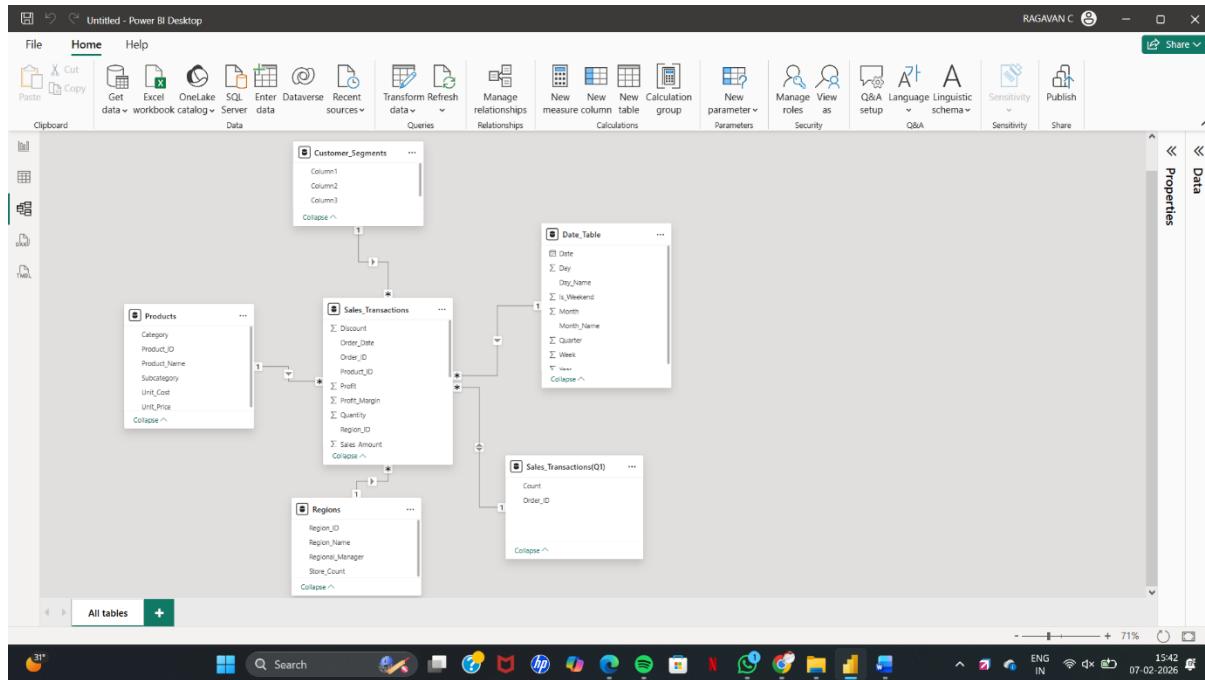
3) Product categories contribute the highest revenue and profit.

The screenshot shows the Power BI Desktop interface with the 'Data' tab selected. On the left, the 'All tables' pane lists several tables: Date_Table, Customer_Segments, Regions, Sales_Transactions, and Products. The Sales_Transactions table is currently selected, and its detailed schema is visible on the right, including columns like Order_ID, Order_Date, Product_ID, Profit, Profit_Margin, Quantity, Region_ID, and Sales_Amount. Relationships between tables are shown as lines connecting their primary and foreign key columns. The Properties pane on the right provides settings for the selected table, such as Name (Sales_Transactions (2)), Description (Enter a description), and Row label (Select a row label). The status bar at the bottom indicates the date as 07-02-2026 and the time as 14:44.

4) Sales performance vary across regions

The screenshot shows a Power BI dashboard with three main visualizations. 1. A world map titled 'Sum of Sales_Amount by Region_Name' showing sales distribution across continents. 2. A bar chart titled 'Regional Sales Performance' comparing sales amounts for North, South, East, and West regions. 3. A stacked bar chart titled 'Category Mix by Region' showing the breakdown of sales by category (Electronics and Office Supplies) across the same four regions. The dashboard is set against a dark blue background. The status bar at the bottom indicates the date as 07-02-2026 and the time as 15:36.

5) Star schema using Sales, Customer, and Product tables



6) DAX measure to calculate Total Sales and Total Profit

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Themes

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Visualizations

Data

Search

Region_Name Avg_Order_Value Total_Quantity Total_Orders1 Sum of Total_Cost Profit_Margin_% Total_Profit Total_Sales

East	\$1,331.25	224	37	\$36,277.61	2634.93%	\$12,978.69	\$49,256.30
North	\$1,849.31	342	55	\$73,410.52	2782.53%	\$28,301.78	\$101,712.30
South	\$1,706.83	348	48	\$56,029.35	3161.12%	\$25,898.29	\$81,927.64
West	\$1,230.77	202	40	\$36,159.64	2655.07%	\$13,071.12	\$49,230.76
Total	\$1,567.37	1116	180	\$2,01,877.12	2844.46%	\$80,249.88	\$2,82,127.00

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Regional & Category Performance

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7) Profit Margin (%) using DAX and identify low-margin products.

Screenshot of Power BI Desktop showing a table visualization and the Data pane.

Table Visualization:

Product_Name	Category	Total_Sales	Total_Profit	Profit_Margin_%	Margin_Status
Stapler Heavy Duty	Office Supplies	\$1,027.47	\$116.19	1130.84%	Medium Margin (10-20%)
Calculator Scientific	Office Supplies	\$2,858.70	\$489.54	1712.46%	Medium Margin (10-20%)
Notebook Set	Office Supplies	\$1,282.69	\$245.43	1913.40%	Medium Margin (10-20%)
Laptop Pro 15	Electronics	\$23,512.39	\$4,647.13	1976.46%	Medium Margin (10-20%)
Desktop Workstation	Electronics	\$33,555.25	\$6,887.58	2052.61%	Good Margin (20-30%)
Tablet 10inch	Electronics	\$15,284.37	\$3,796.56	2483.95%	Good Margin (20-30%)
Mechanical Keyboard	Electronics	\$4,464.90	\$1,154.22	2585.10%	Good Margin (20-30%)
Paper Shredder	Office Supplies	\$11,225.94	\$3,052.94	2719.54%	Good Margin (20-30%)
External SSD 1TB	Electronics	\$7,655.83	\$2,159.06	2820.15%	Good Margin (20-30%)
USB-C Hub	Electronics	\$2,126.36	\$605.95	2849.71%	Good Margin (20-30%)
Whiteboard Large	Office Supplies	\$9,543.74	\$2,733.79	2864.48%	Good Margin (20-30%)
Printer Laser	Office Supplies	\$29,153.33	\$8,724.11	2992.49%	Good Margin (20-30%)
Webcam HD	Electronics	\$6,648.45	\$2,049.57	2992.75%	Good Margin (20-30%)
Headphones Wireless	Electronics	\$12,314.85	\$3,834.92	3114.06%	Excellent Margin (>30%)
Monitor 27inch	Electronics	\$22,476.94	\$7,107.78	3162.25%	Excellent Margin (>30%)
Filing Cabinet	Office Supplies	\$17,826.92	\$5,693.06	3193.52%	Excellent Margin (>30%)
Standing Desk	Office Supplies	\$52,641.69	\$16,912.55	3212.77%	Excellent Margin (>30%)
Desk Lamp LED	Office Supplies	\$6,564.90	\$2,114.66	3221.16%	Excellent Margin (>30%)
Wireless Mouse	Electronics	\$996.73	\$362.94	3641.31%	Excellent Margin (>30%)
Office Chair Executive	Office Supplies	\$20,765.55	\$7,561.90	3641.56%	Excellent Margin (>30%)
Total		\$2,82,127.00	\$80,249.88	2844.46%	Good Margin (20-30%)

Data Pane:

- Filters: Search, Add data fields here, Filters on this page, Filters on all pages, Add data fields here, Drill through, Cross-report, Keep all filters (On), Add drill-through fields here.
- Visualizations: Build visual, various chart and table icons.
- Data: Search, Sales_Transactions(Q1), Order_ID, Product_Action, Product_ID, Product_Score, Profit, Profit_Margin, Profit_Margin%, Profit_Margin_Percentage, Quantity, Region_ID, Sales_Amount, Segment_ID, Shipping_Cost, Total_Cost, Total_Orders1, Total_Profit, Total_Quantity, Total_Sales, Unit_Cost, Unit_Price.

Screenshot of Power BI Desktop showing a Product Profitability Matrix and the Data pane.

Product Profitability Matrix:

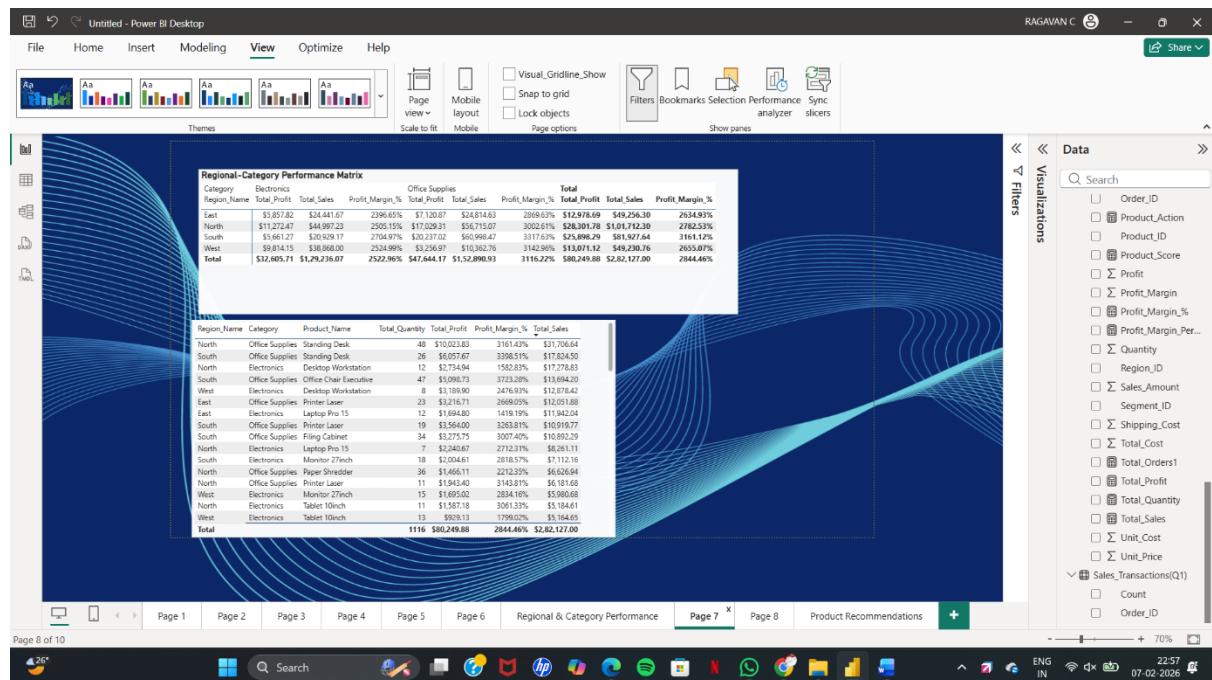
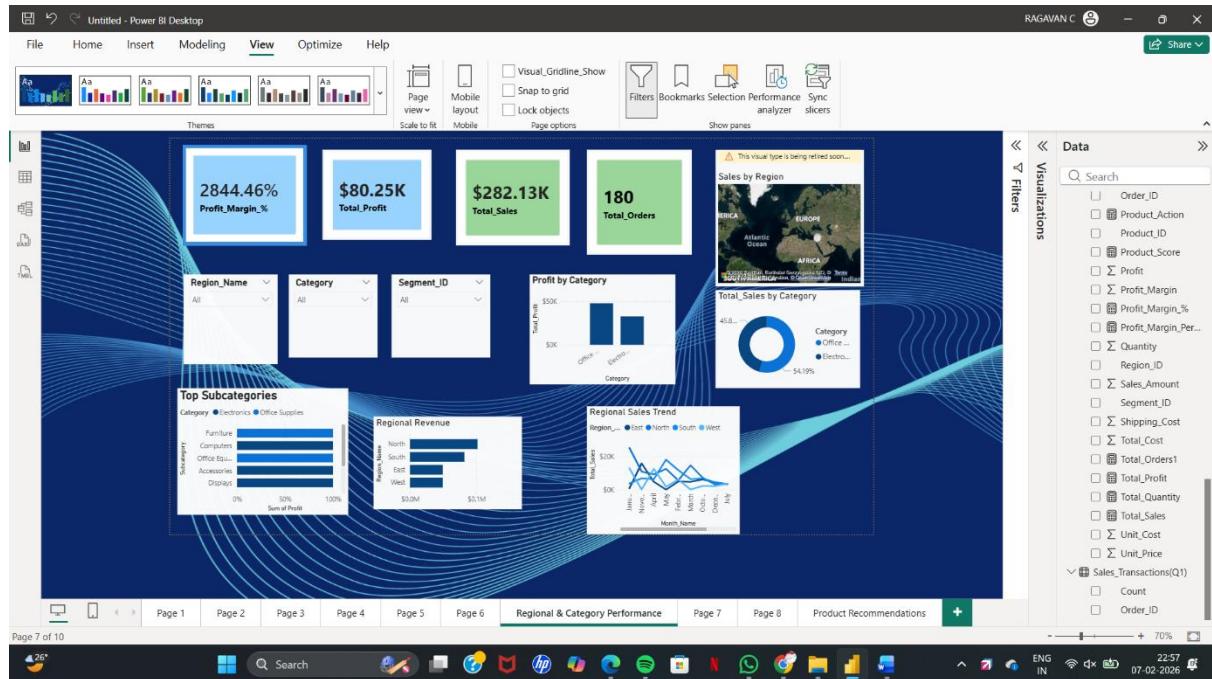
Low Margin Products:

Product_Name	Category	Total_Sales	Profit_Margin_%
Stapler Heavy Duty	Office Supplies	\$1,027.47	1130.84%
Calculator Scientific	Office Supplies	\$2,858.70	1712.46%
Notebook Set	Office Supplies	\$1,282.69	1913.40%
Laptop Pro 15	Electronics	\$23,512.39	1976.46%
Desktop Workstation	Electronics	\$33,555.25	2052.61%
Tablet 10inch	Electronics	\$15,284.37	2483.95%
Mechanical Keyboard	Electronics	\$4,464.90	2585.10%
Paper Shredder	Office Supplies	\$11,225.94	2719.54%
External SSD 1TB	Electronics	\$7,655.83	2820.15%
USB-C Hub	Electronics	\$2,126.36	2849.71%
Whiteboard Large	Office Supplies	\$9,543.74	2864.48%
Printer Laser	Office Supplies	\$29,153.33	2992.49%
Webcam HD	Electronics	\$6,648.45	2992.75%
Headphones Wireless	Electronics	\$12,314.85	3114.06%
Monitor 27inch	Electronics	\$22,476.94	3162.25%
Filing Cabinet	Office Supplies	\$17,826.92	3193.52%
Standing Desk	Office Supplies	\$52,641.69	3212.77%
Desk Lamp LED	Office Supplies	\$6,564.90	3221.16%
Wireless Mouse	Electronics	\$996.73	3641.31%
Office Chair Executive	Office Supplies	\$20,765.55	3641.56%
Total		\$2,82,127.00	2844.46%

Data Pane:

- Visualizations: Product Profitability Matrix.
- Data: Search, Sales_Transactions(Q1), Order_ID, Product_Action, Product_ID, Product_Score, Profit, Profit_Margin, Profit_Margin%, Profit_Margin_Percentage, Quantity, Region_ID, Sales_Amount, Segment_ID, Shipping_Cost, Total_Cost, Total_Orders1, Total_Profit, Total_Quantity, Total_Sales, Unit_Cost, Unit_Price.

8) Dashboard to show regional and category-wise performance.



9) Which products should be discontinued or promoted based on analysis?

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Visualizations:

- Count_Discontinue (Green)
- Count_Optimize (Grey)
- Count_Promote (Green)
- Count_Grow (Green)

Data:

Category	Product_Name	Profit_Margin_%	Total_Sales	Action_Reasoning
Office Supplies	Standing Desk	321.57%	\$52,641.69	High potential, increase marketing spend, improve product visibility, offer promotions.
Office Supplies	Desktop Workstation	52.61%	\$33,355.25	Poor performance. Phase out gradually, clear remaining inventory with promotions.
Electronics	Printer Laser	299.49%	\$28,153.33	High potential, increase marketing spend, improve product visibility, offer promotions.
Electronics	Laptop Pro 15	197.46%	\$23,122.00	Poor performance. Phase out gradually, clear remaining inventory with promotions.
Electronics	Monitor 27inch	316.90%	\$16,475.84	High potential, increase marketing spend, improve product visibility, offer promotions.
Office Supplies	Office Chair Executive	364.56%	\$20,765.55	High potential, increase marketing spend, improve product visibility, offer promotions.
Office Supplies	Filing Cabinet	310.52%	\$17,823.92	High potential, increase marketing spend, improve product visibility, offer promotions.
Electronics	Tablet 10inch	248.95%	\$15,284.37	Poor performance. Phase out gradually, clear remaining inventory with promotions.
Electronics	Headphones Wireless	311.60%	\$10,222.54	High potential, increase marketing spend, improve product visibility, offer promotions.
Office Supplies	Calculator Scientific	271.54%	\$10,122.54	Poor performance. Phase out gradually, clear remaining inventory with promotions.
Office Supplies	Whiteboard Large	2884.49%	\$9,563.74	High potential, increase marketing spend, improve product visibility, offer promotions.
Electronics	External SSD 1TB	2820.15%	\$7,853.83	Poor performance. Phase out gradually, clear remaining inventory with promotions.
Electronics	Webcam HD	299.75%	\$6,843.45	High potential, increase marketing spend, improve product visibility, offer promotions.
Office Supplies	Desk Lamp LED	3221.16%	\$6,564.90	High potential, increase marketing spend, improve product visibility, offer promotions.
Electronics	Mechanical Keyboard	298.90%	\$6,252.70	Poor performance. Phase out gradually, clear remaining inventory with promotions.
Office Supplies	Calculator Scientific	172.49%	\$5,235.70	Poor performance. Phase out gradually, clear remaining inventory with promotions.
Electronics	USB-C Hub	2868.71%	\$2,126.36	High potential, increase marketing spend, improve product visibility, offer promotions.
Total		2844.69%	\$2,82,127.00	Poor performance. Phase out gradually, clear remaining inventory with promotions.. DISCONTINUE

Data:

Category	Product_Name	Profit_Margin_%	Total_Sales	Product_Action
Office Supplies	Standing Desk	321.57%	\$52,641.69	GROW
Office Supplies	Desktop Workstation	52.61%	\$33,355.25	DISCONTINUE
Electronics	Printer Laser	299.49%	\$28,153.33	GROW
Electronics	Laptop Pro 15	197.46%	\$23,122.00	DISCONTINUE
Electronics	Monitor 27inch	316.90%	\$16,475.84	GROW
Office Supplies	Office Chair Executive	364.56%	\$20,765.55	GROW
Office Supplies	Filing Cabinet	310.52%	\$17,823.92	GROW
Electronics	Tablet 10inch	248.95%	\$15,284.37	DISCONTINUE
Electronics	Headphones Wireless	311.60%	\$10,222.54	GROW
Office Supplies	Calculator Scientific	271.54%	\$10,122.54	DISCONTINUE
Office Supplies	Whiteboard Large	2884.49%	\$9,563.74	GROW
Electronics	External SSD 1TB	2820.15%	\$7,853.83	DISCONTINUE
Electronics	Webcam HD	299.75%	\$6,843.45	GROW
Office Supplies	Desk Lamp LED	3221.16%	\$6,564.90	GROW
Electronics	Mechanical Keyboard	298.90%	\$6,252.70	DISCONTINUE
Office Supplies	Calculator Scientific	172.49%	\$5,235.70	DISCONTINUE
Electronics	USB-C Hub	2868.71%	\$2,126.36	GROW
Total		2844.69%	\$2,82,127.00	Poor performance. Phase out gradually, clear remaining inventory with promotions.. DISCONTINUE

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Visualizations:

Data:

Category	Product_Name	Total_Profit	Profit_Margin_%	Product_Action	Total_Sales
Office Supplies	Standing Desk	\$16,912.55	321.77%	GROW	\$52,641.69
Electronics	Desktop Workstation	\$6,987.58	205.61%	DISCONTINUE	\$33,355.25
Office Supplies	Printer Laser	\$8,724.11	290.49%	GROW	\$28,153.33
Electronics	Laptop Pro 15	\$4,647.13	197.46%	DISCONTINUE	\$23,122.00
Electronics	Monitor 27inch	\$7,107.78	316.25%	GROW	\$16,475.84
Office Supplies	Office Chair Executive	\$7,561.93	364.56%	GROW	\$20,765.55
Office Supplies	Filing Cabinet	\$7,561.93	310.52%	GROW	\$17,823.92
Electronics	Tablet 10inch	\$2,796.56	248.95%	DISCONTINUE	\$15,284.37
Electronics	Headphones Wireless	\$3,834.02	311.60%	GROW	\$10,222.54
Office Supplies	Paper Shredder	\$3,052.94	271.54%	DISCONTINUE	\$10,122.54
Office Supplies	Whiteboard Large	\$2,733.79	2884.49%	GROW	\$9,563.74
Electronics	External SSD 1TB	\$2,810.06	2820.15%	DISCONTINUE	\$7,853.83
Electronics	Webcam HD	\$2,049.47	299.75%	GROW	\$6,843.45
Office Supplies	Desk Lamp LED	\$2,114.66	3221.16%	GROW	\$6,564.90
Electronics	Mechanical Keyboard	\$1,154.22	298.90%	DISCONTINUE	\$4,464.00
Office Supplies	Calculator Scientific	\$488.54	172.49%	DISCONTINUE	\$2,858.70
Electronics	USB-C Hub	\$605.58	2844.69%	GROW	\$2,126.36
Office Supplies	Notebook Set	\$265.43	120.84%	DISCONTINUE	\$1,227.47
Office Supplies	Stapler Heavy Duty	\$116.19	110.84%	DISCONTINUE	\$99.73
Electronics	Wireless Mouse	\$362.94	3941.31%	GROW	
Total		\$80,249.88	2844.46%	DISCONTINUE	\$2,82,127.00

Data:

Product Portfolio Matrix

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