

IMARTICUS LEARNING

Data Science and Analytics

"V-Mart store Sales Analysis Report (2024-2025)"

Using Power BI

Desktop

**Project Guide
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Introduction

V-Mart, a retail store, aims to enhance sales performance and operational efficiency. This report delivers an in-depth analysis of V-Mart's sales performance, utilizing Power BI's interactive visualizations to reveal key trends and insights.

Through Pie Charts, Clustered Column Charts, Line and Stacked Column Charts, and Line Graphs, it examines critical metrics like total sales trends, product category performance, payment method patterns, and total units sold from the year 2024 to 2025. The findings offer actionable insights, enabling V-Mart to pinpoint growth drivers, track category and payment trends, and implement data-driven strategies to enhance sales performance and operational efficiency across its stores

Data Preparation and Initial Setup

- Launch Power BI Desktop and select "Get Data" from the Home tab.
- Choose "Text/CSV" from the dropdown menu, then locate and select the V-Mart sales CSV file (e.g., "VMart_Sales_2024_2025.csv"). Click "Transform Data" to open Power Query Editor for cleaning.

In Power Query Editor, check for issues:

- **Handle Missing Values:** Replace nulls in key columns (e.g., Sales, Category) with 0 or remove blank rows using "Remove Blank Rows".
- **Correct Data Types:** Set Year (Whole Number), Sales (Decimal), Items Sold (Whole Number), Category/Payment Method (Text).

Once transformations are complete, click "Close & Apply" in Power Query Editor to load the cleaned dataset into Power BI's data model

Category-wise Sales Distribution (Pie Chart, 2024-2025)

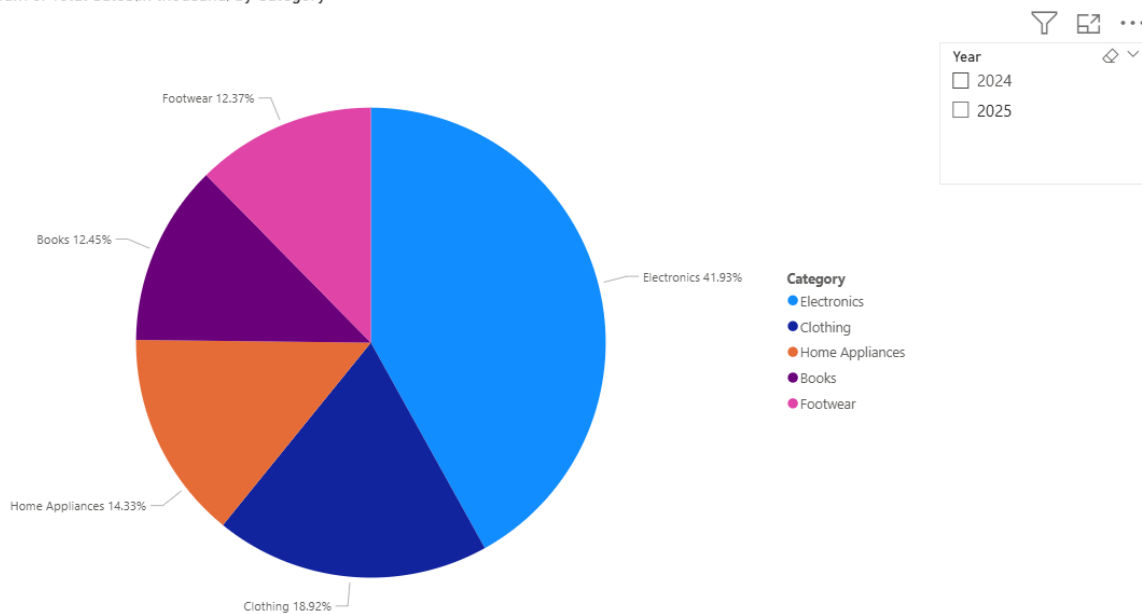
● Goal of the Visualization

The Goal is to analyze and compare the proportion of total sales generated by each product category for the years 2024 and 2025.

● Steps Performed

- Go to the "Report" view
- In the "Visualizations" pane, click the "Pie Chart" icon
- From the "Fields" pane, drag "Category" to the "Legend" field.
- Drag "Total Sales" to the "Values" field.
- In the "Format Visual" pane, toggle "Data Labels" to "On".
- In the "Visualizations" pane, click the "Slicer" icon. Drag "Year" from the "Fields" pane to the slicer's "Field" box. In the "Format Visual" pane, Set "Style" to "Vertical List" (this enables checkboxes)

Sum of Total Sales(in thousand) by Category



● Key Insights

- **Electronics:** Dominant category, growing from 35.81% to 45.43%.
- **Books:** Significant decline from 22.97% to 6.44%.
- **Home Appliances:** Strong growth from 8.78% to 17.5%.
- **Footwear:** Steady increase from 11.26% to 13%.
- **Clothing:** Slight decline from 21.7% to 17.6%.

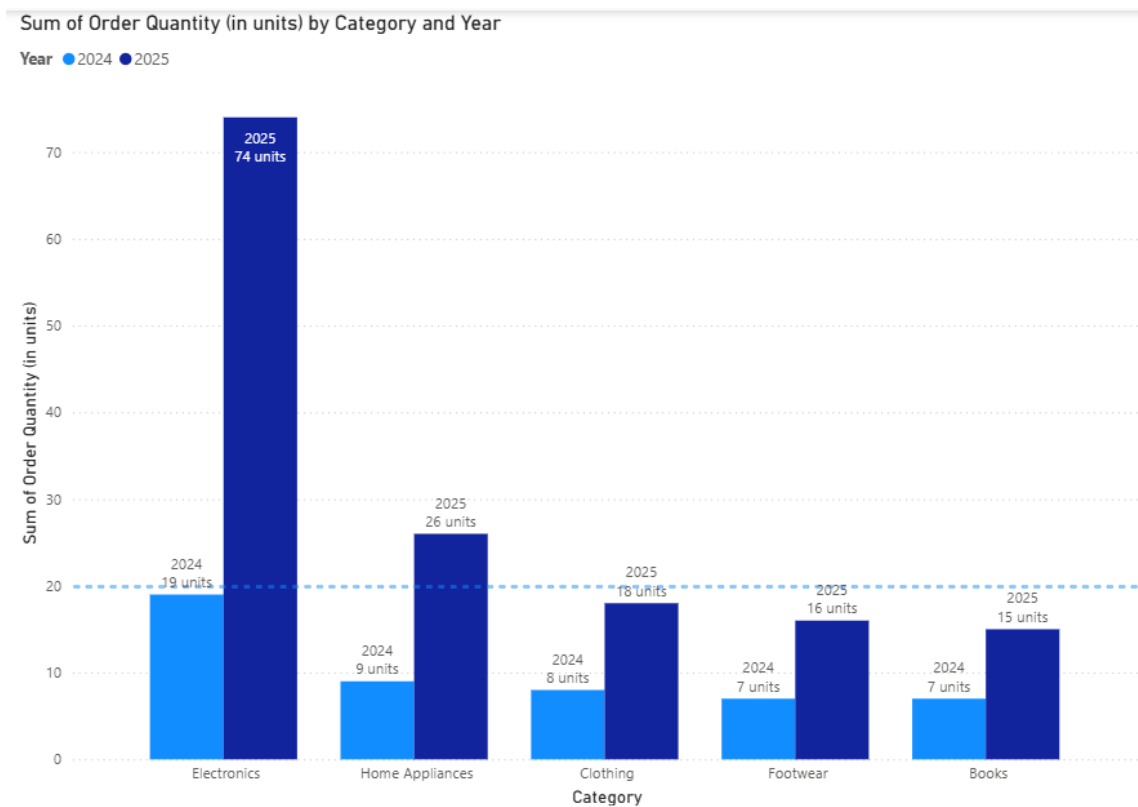
Annual Order Volume Trend (Clustered column chart, 2024-2025)

● Goal of the Visualization

The Goal is to compare order quantities for product categories for years 2024 and 2025, to identify purchasing trends and patterns.

● Steps Performed

- Go to the "Report" view.
-
- In the "Visualizations" pane, click the "Clustered Column Chart" icon (vertical bars with multiple bars per category).
- Drag "Category" to the "Axis" field.
- Drag "Order Quantity" to the "Values" field.
- Drag "Year" to the "Legend" field to show two columns per category (one for 2024, one for 2025).



- In the "Visualizations" pane, go to the "Analytics" tab. Under "Average Line", click "Add". This shows overall average order quantities under categories sold over the two-year span.

● Key Insights

- **Electronics:** Substantial increase from 19 units to 74 units.
- **Home Appliances:** Significant surge from 9 units to 26 units.
- **Clothing:** Growth from 8 units to 18 units.
- **Footwear:** Rise from 7 units to 16 units.
- **Books:** Increase from 7 units to 15 units

Payment Method Usage Over Time (Line and stacked Chart, 2024-2025)

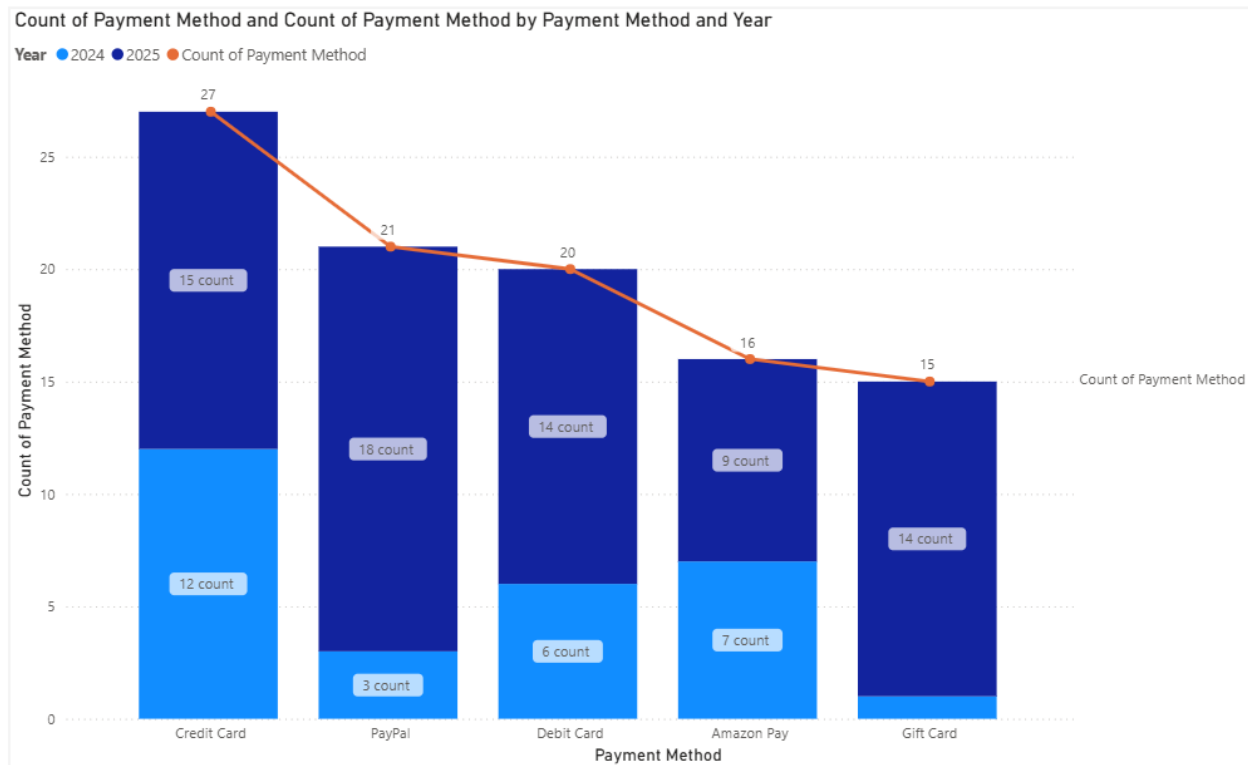
● Goal of the Visualization

The goal is to analyze the count of payment methods used over 2024-2025 to identify trends in customer payment preferences.

● Steps Performed

- Go to the "Report" view.
- In the "Visualizations" pane, click the "Line and stacked column Chart" icon.
- Drag "Payment Method" to the "x-axis" field
- Drag " Payment Method " to the "column y-axis" field and set it to measure "count"
- Drag " Payment Method " to the "Line y-axis" field and set it to measure "count"
- Drag "Year" to the "Legend" field

Toggle "Data Labels" to "On" and select position "inside end" to show sales values at each point inside bars. Toggle "Total Labels" to "On" to show total sales across each category spanning both years.



● Key Insights

- **Paypal:** Most significant growth from 2024 to 2025.
- **Debit Card:** High increase in 2025.
- **Amazon Pay:** Slight increase in usage in 2025.
- **Gift Card:** Very high usage in 2025 (Single use in 2024).
- **Overall Trend:** Most payment methods saw increased usage in 2025.
- **Credit Card:** Highest usage in both years, increased in 2025.

Category Sales Performance Over Time (Line Chart, 2024-2025)

● Goal of the Visualization

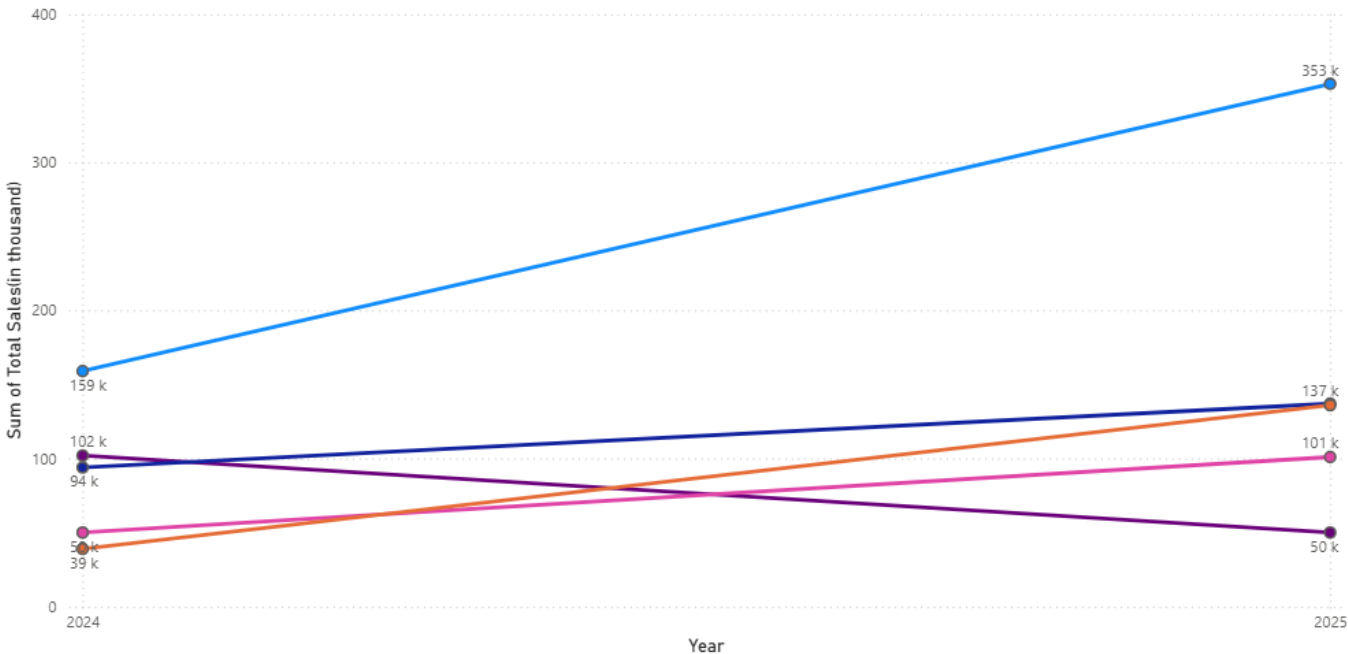
The goal is to analyze the overall sales trends for each category across year 2024 and 2025 to identify patterns of growth, decline, or stability.

● Steps Performed

- Go to the "Report" view.
- In the "Visualizations" pane, click the "Line chart" icon.
- Drag "year" to the "x-axis" field
- Drag "Total Sales" to the "y-axis" field.
- Drag "Category" to the "Legend" field.
- Toggle "Data Labels" to "On" to show sales values at each point.

Sum of Total Sales(in thousand) by Year and Category

Category ● Books ● Clothing ● Electronics ● Footwear ● Home Appliances



● Key Insights

- **Electronics Drives Growth:** Electronics sales surge by 159 k to 353 k contributing the most to the overall sales increase from 2024 to 2025.

- **Books Decline:** Books sales drop by 102 k to 50 k reflecting a shrinking demand in this category.
- **Clothing Items Rise:** Clothing Items sales grow modestly by 94 k to 137 k showing steady but limited growth.
- **Footwear Gains:** Footwear sales increases by 50 k to 102 k maintaining consistent growth
- **Home appliance growth:** Home Appliances sales increases by 39 k to 137 k shows strong growth
(K = thousands)

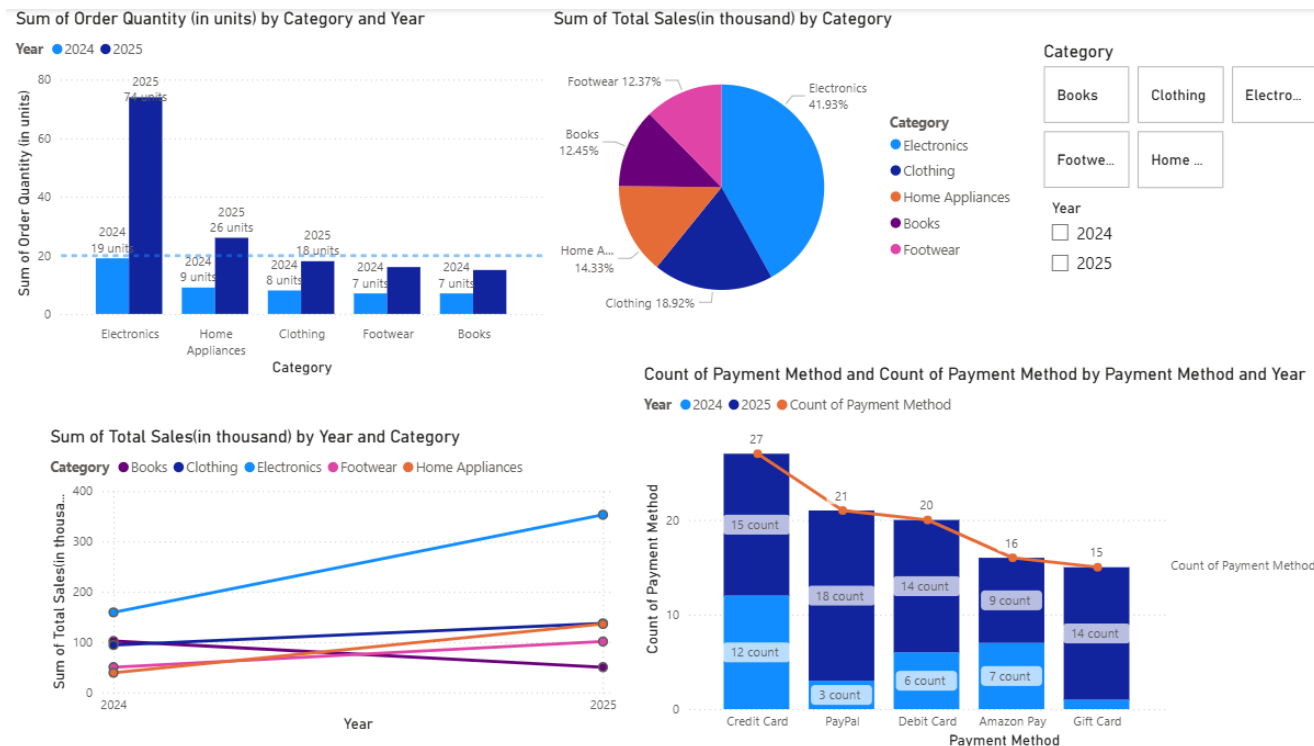
Dashboard Implementation

● Goal of the Dashboard

The goal is to analyze V-Mart's 2024-2025 sales, with interactive filters (Category and Year), to uncover trends in sales, category performance, payment methods, and units sold, enabling data-driven strategic decisions.

● Steps Performed

- Go to the "Report" view. Create a new report page and name it "V-Mart Sales Dashboard".
- Drag the four visuals onto the canvas: Pie Chart (middle), Clustered Column Chart (top-left), Line and Stacked Column Chart (bottom-right), Line Chart (bottom-left).
- Add a Category slicer: Drag "Category" to the canvas, set "Style" to "Dropdown", position at top-right.
- Add a Year slicer: Drag "Year" to the canvas, set "Style" to "Vertical List", position it below Category slicer.
- Filters auto-apply to all visuals upon addition to dashboard.



Conclusion

The V-Mart Sales Analysis for 2024-2025 highlights critical trends in the retail chain's performance, focusing on sales distribution, category shifts, and payment method trends. Electronics lead V-Mart's growth, rising from 35.81% to 45.43% (159K to 353K), while Books drop sharply from 22.97% to 6.44% (102K to 50K). Home Appliances surge (8.78% to 17.5%, 9 to 26 units), Footwear grows steadily (11.26% to 13%), and Clothing Items dip slightly (21.7% to 17.6%). Credit Card, Debit Card, and PayPal transactions increase, but Amazon Pay declines. V-Mart should focus on Electronics and Home Appliances, address Books' decline, and optimize payment methods for sustained growth.

References

PowerBI Software Documentation. (2025). PowerBI Help Guide. Retrieved from <https://learn.microsoft.com/en-us/power-bi/>

V-Mart Sales Data (2024-2025) <https://kaggle.com>.

