Sales Performance Analysis Report

This report presents the findings from a comprehensive sales analysis project conducted on retail sales data spanning January 1, 2025, to December 31, 2025. The project utilized synthetic data generated via ChatGPT, divided into six CSV files representing sales from key markets: Canada, China, India, Nigeria, UK, and the US. The analysis aimed to uncover insights into sales performance, profitability, trends, and other key business metrics to inform strategic decision-making.

Objectives:

The primary goals were to:

- Analyze sales, profit, and order metrics across geographies.
- Identify top-performing regions and cities.
- Examine temporal trends (monthly and daily).
- Evaluate the impact of payment methods, discounts, and product categories on overall performance.
- Create an interactive dashboard to visualize insights for stakeholders.

Six specific business questions were addressed using SQL queries, with results visualized in Power BI.

Data Overview:

Sources: Six CSV files containing sales data for:

- Canada
- China
- India
- Nigeria
- UK
- US

Data Generation: All data was synthetically created using ChatGPT to simulate realistic retail transactions, including fields such as order date, location, product category, payment method, sales amount, profit, discount, and order volume.

Key Metrics in Dataset: Sales amount, profit, discount given, order count, payment method, product category, country, city, and date.

Tools Used:

Excel - was used for initial exploration and preprocessing.

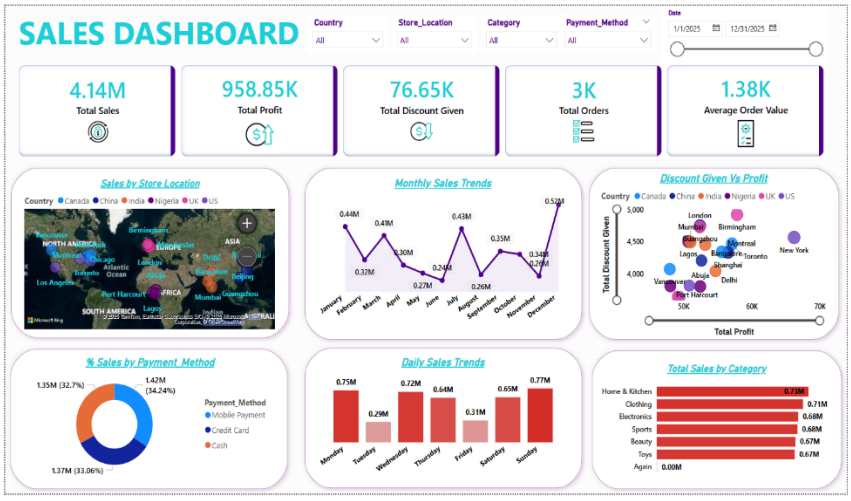
SQL - for Cleaning and querying business questions.

Power BI – used to create an interactive dashboard for intuitive data exploration.

Analysis & Insights:

- Total Metrics: Achieved $4.14M in sales, $958.85K in profit, and 3K orders, with an average order value of $1.38K.
- Top Performers: US and India led sales, with cities like New York and Mumbai showing high profitability.
- Trends: Sales peaked in November ($0.52M) and on Sundays ($0.77M), indicating seasonal and weekend shopping patterns.
- Payment Methods: Mobile Payment ($1.42M, 34.24%), Credit Card ($1.37M, 33.06%), and Cash ($1.35M, 32.7%) contributed nearly equally.
- Discount Impact: $76.65K total discount; higher discounts in Nigeria reduced profits, while minimal discounts boosted US margins.
- Categories: Home & Kitchen ($0.73M) led revenue, followed by Clothing ($0.71M) and Electronics ($0.68M).

Dashboard:



The Sales Dashboard offers a detailed snapshot of sales performance, showcasing total sales of 4.14M and profits amounting to 958.85K. It includes a global view of sales by store location across countries like Canada, China, and the UK, with data spanning from January 1 to December 31, 2025. The dashboard highlights monthly sales trends, peaking at 0.52M, alongside daily sales variations, with Sunday reaching 0.77M. It also breaks down sales by payment method, with mobile payment at 34.24% and cash at 32.7%. Additionally, it compares total discounts given (76.65K) against profits and categorizes sales, with Home & Kitchen leading at 0.73M.

Challenges and Limitations:

- **Synthetic Data:** While realistic, ChatGPT-generated data may not capture real-world anomalies.
- **Scope:** Analysis limited to provided geographies and categories; no external factors like marketing spend included.
- **Assumptions:** Currency standardized to USD; no inflation adjustments.

Conclusions and Recommendations:

This project demonstrates robust sales performance with $4.14M in total revenue and strong profitability across global markets. Key strengths include diversified payment options and high-revenue categories like Home & Kitchen. However, discount strategies in underperforming regions like Nigeria warrant review to protect margins.

Recommendations:

- Expand into high-performing cities with targeted marketing.
- Leverage seasonal trends for Q4 promotions.
- Optimize discounts to balance customer attraction and profitability.
- Integrate real-time data feeds for ongoing monitoring.
- Explore advanced analytics, such as predictive modeling for demand forecasting.