

Descriptive Sales Analysis & Financial Dashboard

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Project Overview

- The project provides a descriptive analysis of sales data and profit trends across store locations and categories using four CSV file imported into PostgreSQL. The data was first merged into a consolidated table, then cleaned and transformed to handle missing values, duplicates and to add calculated columns such as revenue and profit.
- Insights were then explored and visualized using Power BI dashboard, highlighting sales trends across regions and months, top-performing products and categories and key financial indicators.
- This analysis delivers actionable insight to better understand business performance and informed decision-making.



Introduction

- **Objective:** understand sales performance by category & location.
- **Dataset:** 4 CSV files containing sales transactions (Date, Country, Store Location, Product Name, Category, etc.)
- **Goal:** identify monthly and daily trend, top categories, country and store locations' sales and gain financial insight.

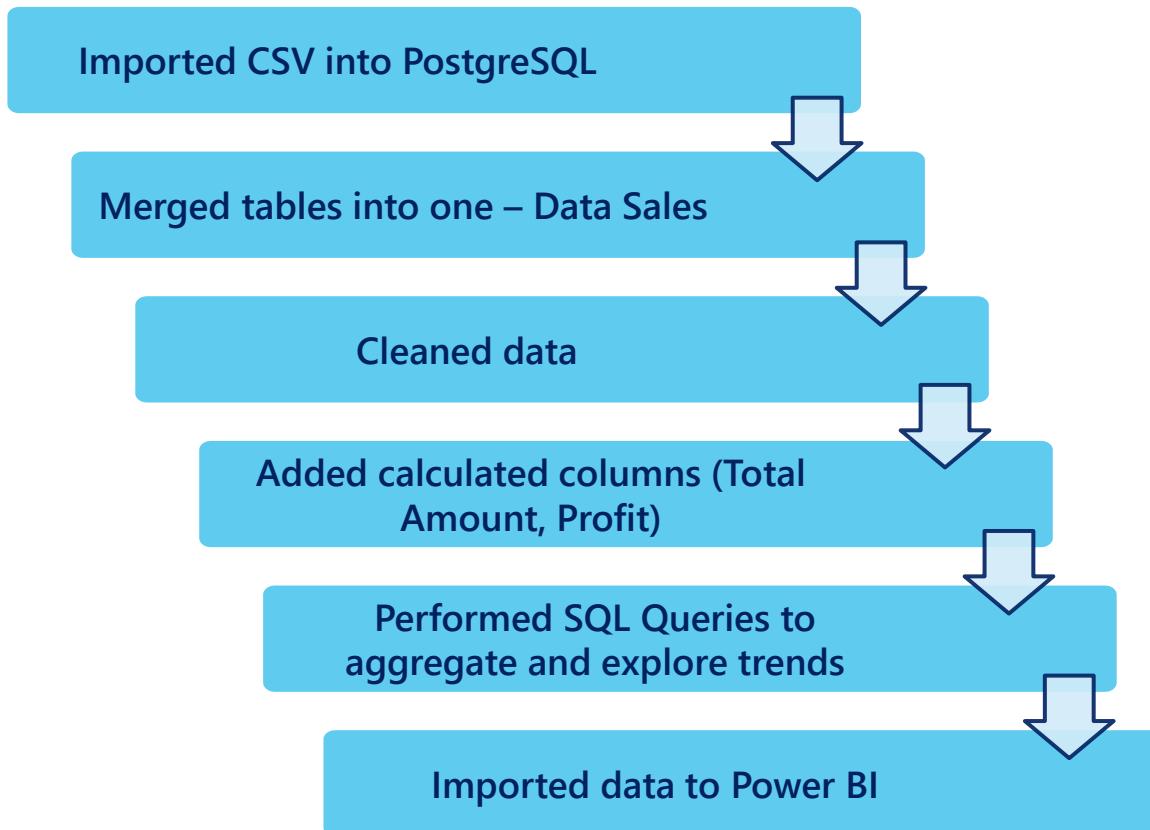


Data Sources

- 4 CSV files imported into PostgreSQL as separate tables;
- Columns included: Date, Country, Store Location, Product Name, Category, Price Per Unit, Quantity Purchased, Cost Price, Discount Applied, Payment Method, Sales Representative;
- Source: data sourced from [Data Tutorials Channel](#), used for educational purposes.
- Data was merged into a single table for analysis.



Workflow / SQL Process





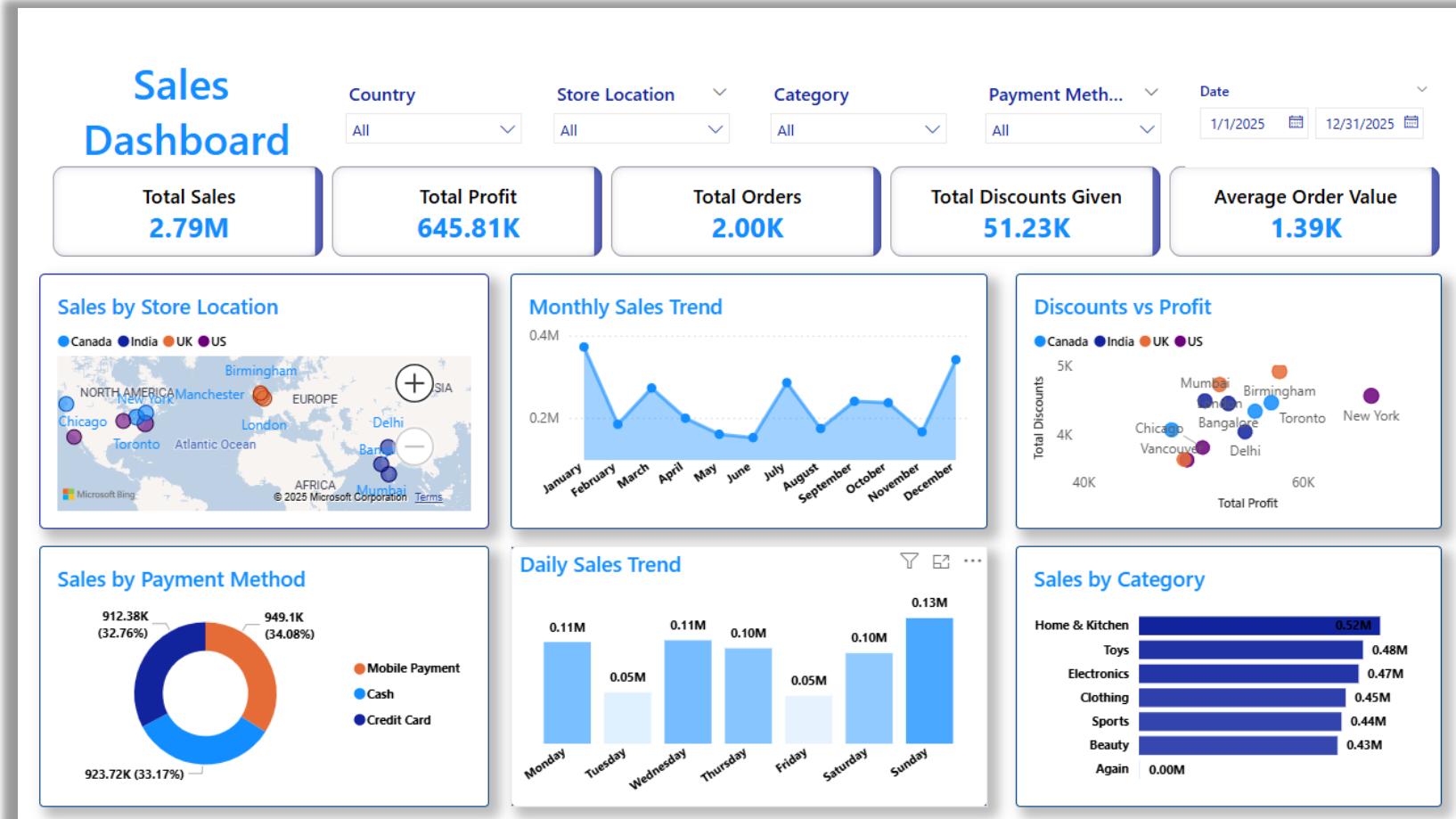
DB Schema - Data Sales

Name	Data type	Length/Precision	Scale	Not NULL?	Primary key?	Default
Transaction ID	text	▾		<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Date	date	▾		<input type="checkbox"/>	<input type="checkbox"/>	
Country	text	▾		<input type="checkbox"/>	<input type="checkbox"/>	
Product ID	text	▾		<input type="checkbox"/>	<input type="checkbox"/>	
Product Name	text	▾		<input type="checkbox"/>	<input type="checkbox"/>	
Category	text	▾		<input type="checkbox"/>	<input type="checkbox"/>	
Price Per Unit	numeric	▾		<input type="checkbox"/>	<input type="checkbox"/>	
Quantity Purchased	integer	▾		<input type="checkbox"/>	<input type="checkbox"/>	
Cost Price	numeric	▾		<input type="checkbox"/>	<input type="checkbox"/>	
Discount Applied	numeric	▾		<input type="checkbox"/>	<input type="checkbox"/>	
Payment Method	text	▾		<input type="checkbox"/>	<input type="checkbox"/>	
Customer Age Group	text	▾		<input type="checkbox"/>	<input type="checkbox"/>	
Customer Gender	text	▾		<input type="checkbox"/>	<input type="checkbox"/>	
Store Location	text	▾		<input type="checkbox"/>	<input type="checkbox"/>	
Sales Represent	text	▾		<input type="checkbox"/>	<input type="checkbox"/>	
Total Amount	numeric	▾	10	2	<input type="checkbox"/>	<input type="checkbox"/>
Profit	numeric	▾	10	2	<input type="checkbox"/>	<input type="checkbox"/>

Fig. 1. Data Sales Columns



Dashboard Overview





Visualizations & Insights

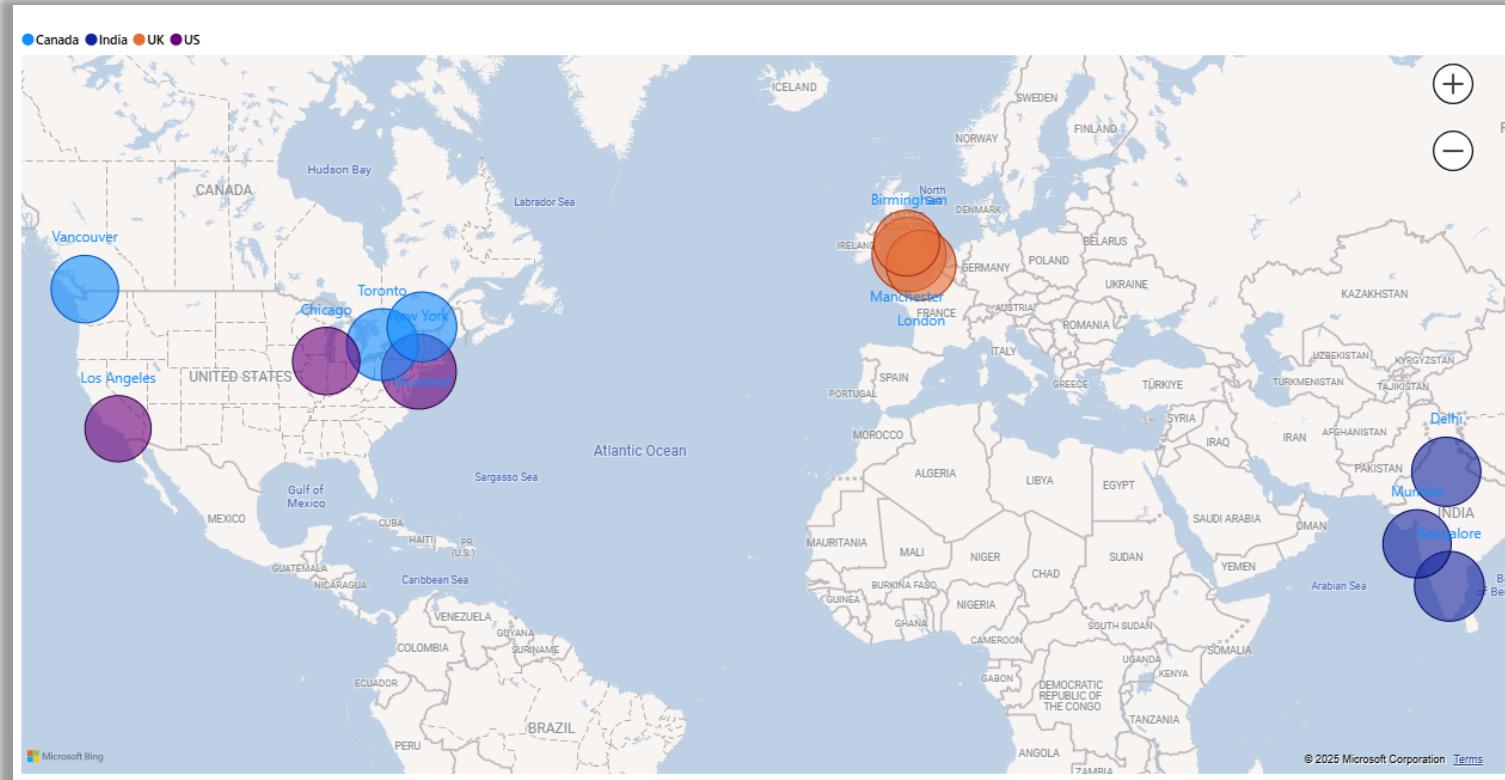


Fig. 3. Sales by Store Locations

All stores generated similar sales revenues, no matter where they were located.



Visualizations & Insights

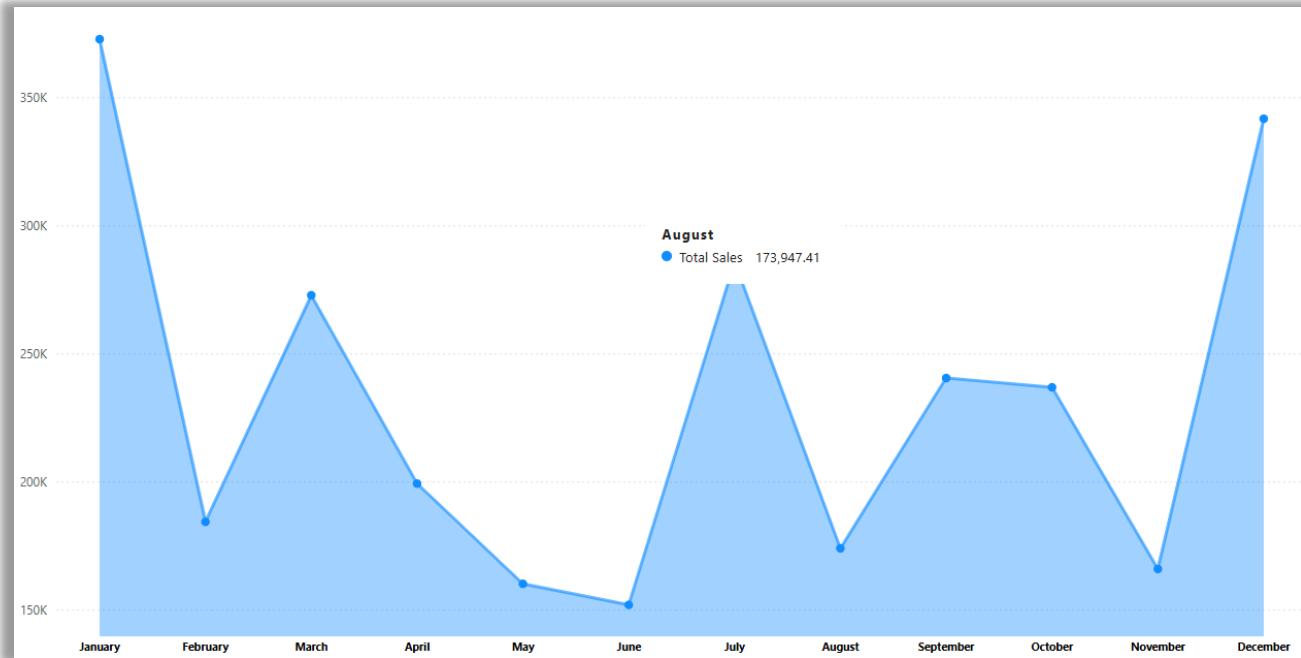


Fig. 4. Monthly Sales Trend

Peak sales occur in January and December, while lowest sales occur in June and August, which might suggest a higher demand during holidays



Visualizations & Insights



Fig. 5. Discount vs Profit - Canada

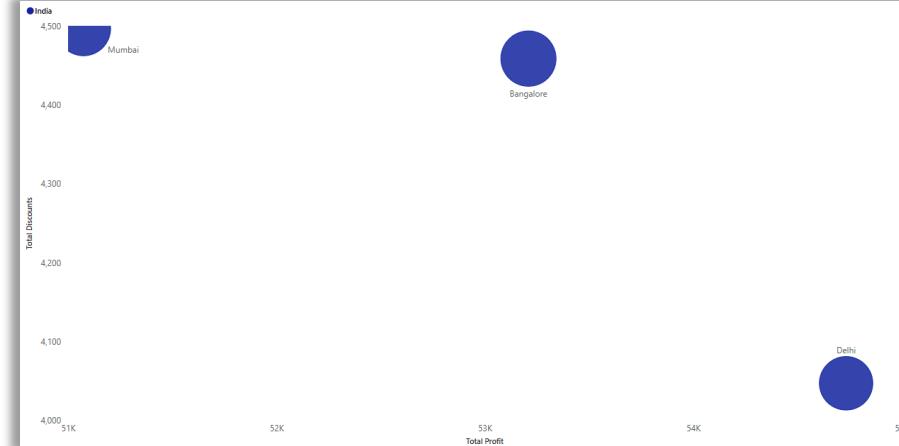


Fig. 6. Discount vs Profit - India

These scatter plots suggests that while in Canada there might be a positive correlation between the discounts given and the profits, the situation is exactly opposite in India.



Conclusions & Recommendations

- Overall KPI's have been calculated.
- Monthly And daily sales trends have been identified.
- There is no direct correlation between profit and discounts worldwide.
- The dashboards provides interactive insights.
- Descriptive analysis helps understand historical performance in order to plan future business strategies.



Technologies/Tools Used

- PostgreSQL: data storage, data cleaning, data manipulation
- Power BI: dashboard & visualization.