📊 Retail Sales Analysis Dashboard with Power BI

🚀 Turning raw sales data into actionable insights through interactive dashboards.

🎯 Project Summary

This project demonstrates my ability to perform **data analysis, modeling, and visualization** using **Power BI** to provide business insights for decision-making in a retail sales environment.

I worked with a dataset containing **Invoices, Product Codes, Descriptions, Quantities, Dates, Customer IDs, Prices**, and calculated **Sales Amount (Price × Quantity)**.

🔍 Business Problem

The retail company wanted answers to these questions:

- Which products contribute the most to revenue?
- Which customers are placing the highest orders?
- How does sales volume vary over time?
- How can we monitor KPIs such as total sales, average order size, and repeat business?

🛠️ Tools & Technologies

Tool	Purpose
Power BI Desktop	Data Modeling, Visualization
DAX	Measures & Calculations
Excel	Initial Data Cleaning (Optional)

📝 Data Columns Used

Column	Description
Invoice	Invoice Number

Column	Description
StockCode	Unique Product Code
Description	Product Description
Quantity	Units Sold
InvoiceDate	Date of Transaction
Customer ID	Unique Customer Identifier
Unit Price	Price per Unit
Sales Amount	Calculated as **Quantity × Unit Price**

💡 Key KPIs Calculated

KPI	Formula
Total Orders	DISTINCTCOUNT(Invoice)
Total Spend	SUMX(Quantity × Unit Price)
Average Quantity	AVERAGE(Quantity)

🗁 Dashboard Overview

🔷 Main Visualizations

Visualization	Purpose
Bar Charts	Top Products by Revenue
Matrix Table	Sales Breakdown by Country & Product
KPI Cards	High-level performance metrics
Slicers	Date range, Product, Country filtering
Drill-through Pages	Deep dive into specific Customers
Tooltip Pages	Hover for Transaction Details

📊 Sample Report Structure (Pages in Power BI)

1️⃣ Sales Overview Page

High-level KPIs, Product Sales by Quantity, Revenue Trends

2️⃣ Customer Analysis Page

Drill-through enabled on **Customer ID**

- Transactions by Customer
- KPIs: Total Spend, Average Quantity, Total Orders

3️⃣ Product Insights Page

Top Selling Products by Revenue & Quantity
Product Category Performance (if applicable)

4️⃣ Time Analysis Page

Monthly, Weekly Trends
Seasonality Patterns

5️⃣ Detailed Tooltip

On hover: Invoice, Product, Quantity, Price, Sales Amount

📌 Why This Project Matters

✅ Demonstrates skills in:

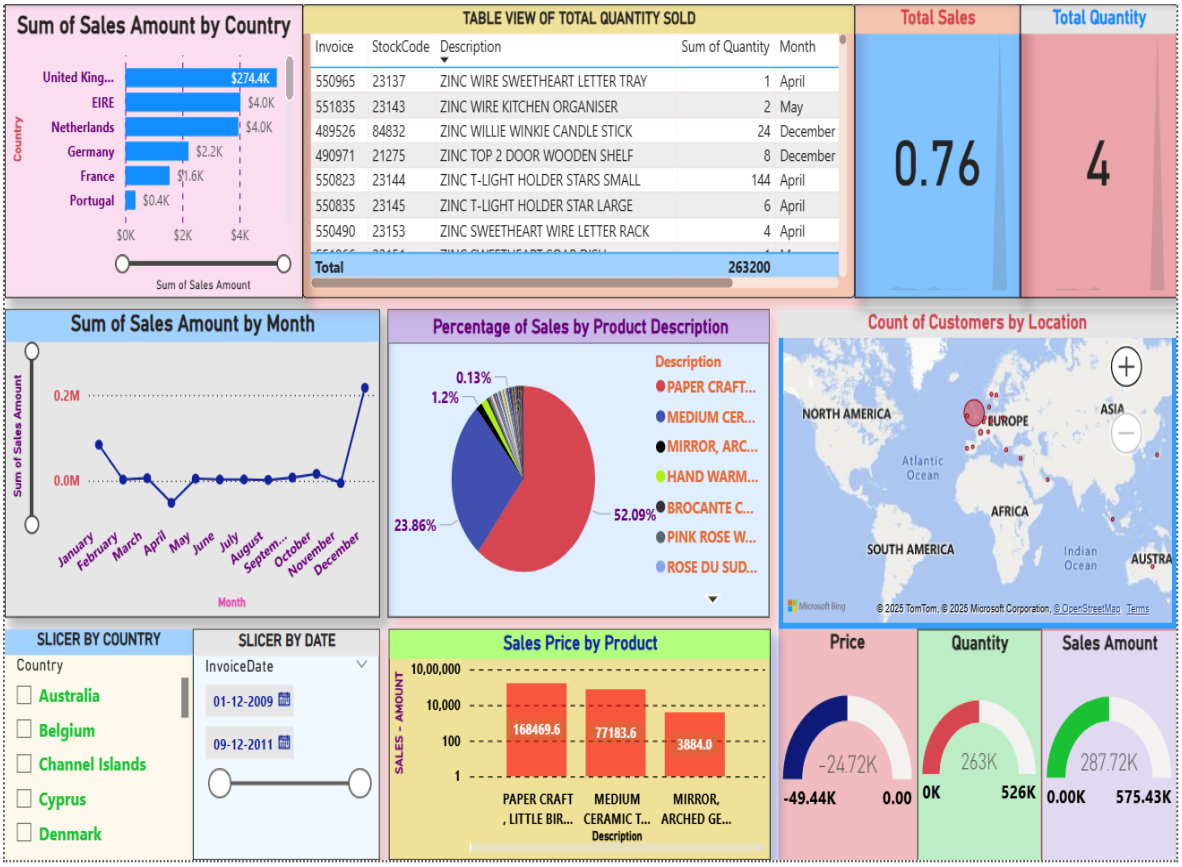
- Data Modeling
- Data Transformation
- DAX Calculations
- Interactive Visual Reporting
- Business Insights & Storytelling

✅ Aligns with real-world expectations of a **Business Analyst / Data Analyst / BI Developer** role.

🎨 Sample Screenshots of Dashboard :-

Example Visual

Drill-through Customer Transactions



💡 Insights Delivered

- Identified **key customers driving sales**.
- Highlighted **top-performing products** by revenue.
- Enabled analysis of **order patterns over time**.
- Provided clear, actionable KPIs for business stakeholders.

🚀 Project Outcome

This project showcases my proficiency in:

- Analyzing large transactional datasets.
- Building clean, executive-friendly dashboards.
- Applying DAX for advanced business metrics.
- Providing insights that lead to smarter decisions.