**📊 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 |
| 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 Report (Recommended to Add Later)**

| **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.