Project Documentation – Sales & Profit Analysis Dashboard

Harsvardhan Rajgarhia

06th September, 2025.

Academy of Technology, B.Tech CSBS, Batch of 2027.

1. Project Overview

The objective of this project was to design and develop a **Sales & Profit Analysis Dashboard** in **Power BI** that provides executives and managers with actionable insights into revenue, profit, customer orders, and data quality issues.

This dashboard allows business leaders to monitor overall performance, analyze trends, and drill into store- and product-level details for decision-making.

2. Dataset Description

The dataset used is a **simulated transactional dataset**, consisting of **20,000+ sales orders** across 4 stores, 10 products, and 12 months of 2024.

- **Fact Table**:

    - fact_orders → Order ID, Order Date, Store ID, Product ID, Quantity, Unit Price, Discount, Channel, Revenue, Cost, Profit

- **Dimension Tables**:

    - dim_date → Date, Month, Year

    - dim_store → Store ID, Store Name, Region

    - dim_product → Product ID, Product Name, Category

3. Tools & Techniques

- **Power BI** → Dashboard design & interactivity

- **Power Query** → Data cleaning & transformations

- **DAX** → KPI calculations & business logic

- **Excel / CSV** → Data source

- **Visualization Techniques** → Line charts, bar charts, donut, KPI cards, slicers

4. Key Features of Dashboard

- **KPI Cards**: Total Sales, Total Profit, Profit Margin %, Order Count, Average Order Value, Data Mismatch %.

- **Filters (Slicers)**: Year, Region, Channel (interactive filters across visuals).

- **Visuals**:

    - Line Chart: Monthly Sales & Profit Trend

    - Clustered Column: Region-wise Sales & Profit

    - Bar Chart: Top Products & Stores by Sales

    - Donut Chart: Revenue Flags (Data Quality)

    - Gauge: Data Mismatch % Health Indicator

- **Drill-through Page**: Detailed Store/Product view with sales, profit, and orders breakdown

---

5. DAX Measures Created

Measure Name	DAX Formula
Total Sales	SUM (*fact_orders[Revenue]*)
Total Profit	SUM (*fact_orders[Profit]*)
Profit Margin %	DIVIDE (*[Total Profit], [Total Sales], 0*)
Avg Order Value	DIVIDE (*[Total Sales], [Order Count], 0*)
Mismatch %	DIVIDE (*[Mismatch Count], [Order Count], 0*)

---

6. Business Insights

- **Revenue Performance**: South region contributed the highest sales (~₹0.7M), followed by North.

- **Profitability**: Average Profit Margin remained around ~29%, with North region being the most profitable.

- **Product Analysis**: Product P010 consistently ranked as the top-selling product.

- **Mismatch Check**: ~43% of orders flagged as mismatched (quality issues in data).

- **Trend**: Sales peaked in Q4, indicating seasonal demand spikes.

---

7. Outcome

This project demonstrates the ability to build professional BI dashboards using **Power BI, Power Query, and DAX**. It highlights practical business insights and reflects strong analytical and visualization skills suitable for real-world business applications. The dashboard delivers a **boardroom-ready executive report** that combines **business KPIs, visual storytelling, and drill-through analysis**.

It demonstrates:

- Ability to design **data models (star schema)**.

- Proficiency in **Power Query & DAX**.

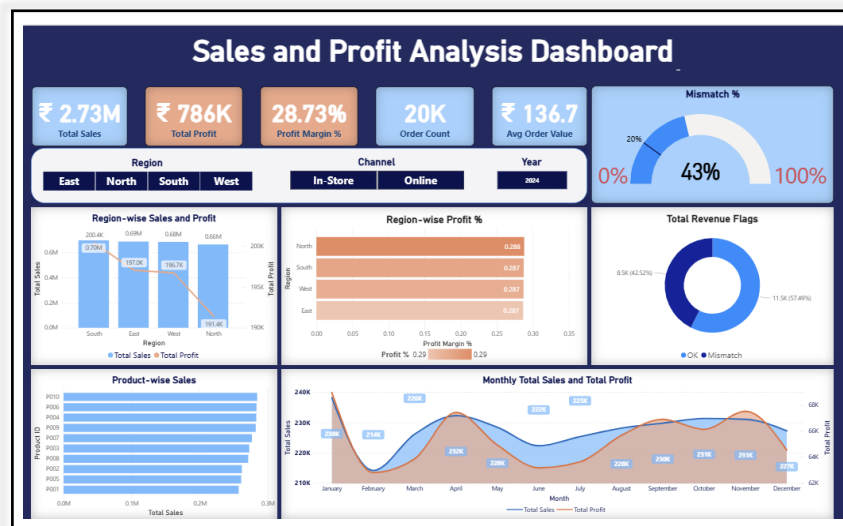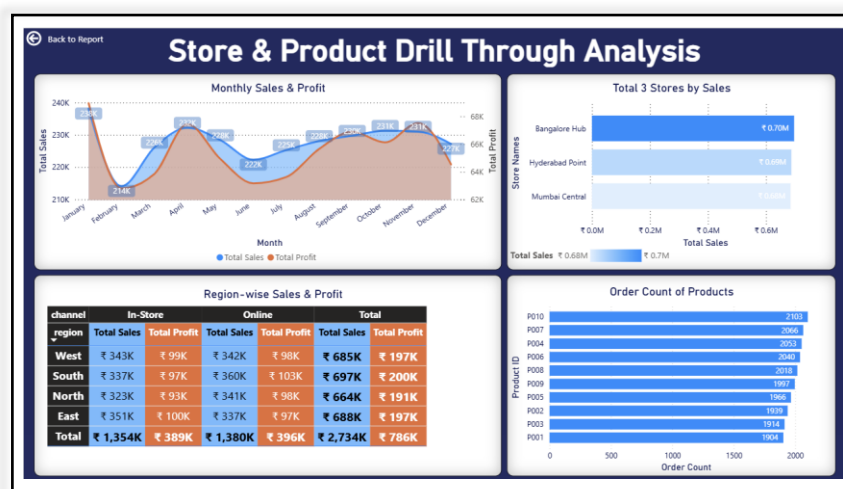- Strong skills in **dashboard design & business communication**.

Figure 1 : Sales & Profit Dashboard

Figure 2 : Product & Region Drill Through Dashboard

Harsvardhan Rajgarhia – Sales & Profit Dashboard Project