Sales Performance Analysis Dashboard - Technical Report

This report documents the process and design decisions behind the creation of my Power BI Sales Performance Analysis Dashboard. The goal of this project was to transform raw sales data from the "Sample - Superstore" dataset into a visually intuitive and interactive dashboard that provides actionable insights on overall sales health, product performance, customer behavior, and profitability.

Dataset Overview

The dataset used is the "Sample - Superstore.csv" file, which contains transactional sales data including order details, customer information, product hierarchy, and profitability metrics. This a dataset I found on Kaggle which is meant to simulate a real business dataset.

You can find the dataset at the following link :
https://www.kaggle.com/datasets/vivek468/superstore-dataset-final

Columns included:

- Order ID, Order Date, Ship Date, Ship Mode
- Customer ID, Customer Name, Segment, Region, State, City, Postal Code
- Product ID, Product Name, Category, Sub-Category
- Sales, Quantity, Discount, Profit

Data Model and Structure

To ensure a clean and scalable model, I split the original flat file into several logical tables using Power Query:

- **Financials**: Fact table containing metrics like Sales, Profit, Discount, Quantity, and foreign keys.
- **Customer**: Dimension table with customer info (ID, name, segment, location).
- **Product**: Product information (ID, name, category, sub-category).
- **Order**: Order information (order ID, dates, ship mode).
- **Calendar**: Custom date table created using DAX for time calculations.

I also made sure that the data was valid and didn't contain any missing entries or duplicates. In this case, multiple columns contained duplicates which I then removed.

Relationships:

- One-to-many relationships were established from each dimension to the Financials table.
- A one-to-many relationship was also created from Calendar to the Order table via Order Date.

Display Folder Organization

To keep the model clean and easy to navigate, columns and measures were organized into display folders in Model View:

- **Financials**: KPIs, Keys
- **Customer**: Customer Info, Location, Keys
- **Product**: Product Info, Keys
- **Calendar**: Date Parts (month, year)
- **Measures Table**: Sales KPIs, Profit KPIs, Growth, Customer KPIs

Measures Created

I created a set of DAX measures for reporting and analysis:

- Total Sales
- Total Profit
- Profit Margin
- Total Loss (negative profits)
- Sales by Product, Region, and Customer
- Monthly Sales

- Monthly Sales Previous Month
- Monthly Growth %
- Rank by Sales (Customer Level)

Dashboard Pages & Visuals

1. Overview Page

A summary view showing high-level KPIs and trends.

- Cards: Total Sales, Total Profit, Total Loss, Monthly Growth %
- Line Chart: Sales trend over time
- Donut chart showing Sales by Segment
- Bar chart showing Sales by Category

2. Sales Performance

Focus on top-performing products and regions.

- Total Sales By Category (Bar Chart)
- Top 10 Cities by Sales (Bar Chart)
- Sales by Category/Sub-Category (Treemap)
- Monthly Sales and Monthly Growth % (Line + Column Chart)

4. Profit & Losses

Analyzing overall profitability and risk areas.

- Cards: Total Profit, Total Loss, Profit Margin, YoY Growth %
- Line Chart: Profit Trend over time
- Table: Loss-making products filtered to Profit < 0
- Bar Chart: Loss-Making Products By Category filtered to Profit < 0

3. Customer Insights

Understanding customer contributions and segments.

- Top Customers by Sales (Bar Chart)
- Customer Sales Table with Rank
- Segment-wise Sales (Donut Chart)
- Category of Sales by State (Map)
- Customer Name Slicer

Conclusion

This Power BI dashboard project is meant to demonstrate my ability to do the complete process from raw data shaping to creating a clean data model and designing interactive, visually compelling reports. The final deliverable allows users to monitor sales, evaluate customer value, and track profitability with ease.

It was a great hands-on experience in applying DAX, Power Query, visual design principles, and business analysis skills in a real-world context.