**Power BI Project Documentation**

**Project Title: Sales Performance Analysis**

**Objective:**

This report helps managers monitor monthly sales, analyze top-performing products, and understand regional performance.

📂 **Data Sources:**

* Source: generated data sets by chat gpt.
* Records: 10,000

This Power BI report was built using three Excel files:

1. Sales\_Data.csv – Contains transactional sales data

- Fields: Sale ID, Sale Date, Product ID, Customer ID, Quantity

2. Products.csv – Contains product information

- Fields: Product ID, Product Name, Category, Price

3. Customer.csv – Contains city and Customer data

- Fields: City, Customer ID, Name

**🧹 Data Cleaning & Transformation:**

* Removed duplicate rows
* Converted text to date format
* Standardized category names

**🔗 Data Modeling and Relationships:**

In Power BI, I created relationships between the three Excel files to build a unified data model

--Sales\_Data[Product ID] → Products[Product ID] (Many-to-One)

--Sales\_Data[Customer ID] → Customer\_Data[Customer ID] (Many-to-One)

**🔢 DAX Measures:**

* Total sales = SUM('sales'[quantity])
* Total Revenue = SUMX(Sales, Sales[Quantity] \* RELATED(Products[Price]))
* Average Price = AVERAGE(products[price])
* Top\_Product\_Revenue =

VAR TopProduct =

    TOPN(

        1,

        ADDCOLUMNS(

            VALUES('products'[product\_name]),

            "Revenue", [Total Revenue]

        ),

        [Total Revenue],

        DESC

    )

RETURN

    MAXX(TopProduct, [Total Revenue])

* Top\_Product\_Sales =

VAR TopProduct =

    TOPN(

        1,

        ADDCOLUMNS(

            VALUES('products'[product\_name]),

            "SalesValue", [Total Sales]

        ),

        [Total Sales],

        DESC

    )

RETURN

    MAXX(TopProduct, [Total Sales])

* Top\_Selling\_Product =

VAR TopProduct =

    TOPN(

        1,

        SUMMARIZE('Sales', 'products'[product\_name], "SalesAmount", [Total Sales]),

        [Total Sales],

        DESC

    )

RETURN

    SELECTCOLUMNS(TopProduct, "Product", 'products'[product\_name])

* TopRevenueProduct =

CALCULATE(

    MAXX(

        TOPN(1, VALUES('products'[product\_name]), CALCULATE([Total Revenue]), DESC),

        'products'[product\_name]

    )

)

* LaptopRevenue =

CALCULATE(

    [Total Revenue],

    FILTER(

        'products',

        'products'[product\_name] = "Laptop"

    )

)

* LaptopRevenuePct =

DIVIDE(

    [LaptopRevenue],

    [Total Revenue],

    0

)

**📊 Visuals Used:**

* **Line Chart –** Monthly Sales Trend
* **Bar Chart –** Sales by Region
* **Donut Chart –** Revenue by Product Name
* **Cards** – KPIs like Total Sales by Category, Total Revenue, Top selling Product, Top Revenue generator, Laptop Revenue, Laptop sales, Laptop Revenue Percentage, Highest sales value
* **Slicers** – Product Name, Sales Date

**🔍 Key Insights:**

**Overall Performance:**

The total sales volume is 10,038 units, generating a total revenue of ₹16.89 crore.

**Category Performance:**

The Electronics category significantly leads, contributing 97.03% (₹163.92 million) of the total revenue, while Accessories contributed 2.97% (₹5.02 million).

**Top-Performing Product:**

Laptop is the top revenue generator, contributing ₹134.09 million in revenue from 2,438 units sold, achieving an average price of ₹55,000 per unit.

Product Breakdown:

* Laptop (Electronics): ₹134.09 million (2,438 units)
* Monitor (Electronics): ₹29.83 million (2,486 units)
* Keyboard (Accessories): ₹3.69 million (2,461 units)
* Mouse (Accessories): ₹1.33 million (2,653 units)

**Monthly Trends:**

March recorded the highest sales volume (903 units) and highest revenue (₹16.1 million). Sales showed consistency across months with peaks in March, May, and August.

**City-wise Distribution:**

Major cities like Bangalore, Chennai, Delhi, Kolkata, and Mumbai contributed to overall sales. Bangalore and Kolkata showed higher sales. Kolkata has the highest sales at 565 units, and also the highest revenue at ₹9M.

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