

Create a Sales Dashboard

Objective: Build an insightful dashboard to analyze sales data, track key performance indicators (KPIs), and provide actionable insights for sales improvements.

Requirements:

1. Advanced Metrics & Calculations

- **Sales Growth Rate:** Calculate month-over-month (MoM) and year-over-year (YoY) sales growth rates.
- **Average Order Size:** Compute the average order size (Total Sales/Quantity Sold).
- **Profit Calculation:** Add a column for Profit
- **Sales by Time of Day:** Analyze sales trends by time (morning, afternoon, evening, night) based on the Time column.

2. Dashboard Elements

- **KPIs Summary Section:** Include the following metrics as KPIs:
 - Total Sales
 - Total Quantity Sold
 - Total Profit
 - Average Order Size
 - Sales Growth Rate
 - Return Rate
- **Top Products, Regions, and Customers:**
 - Top 2 products by total sales
 - Top 2 regions by total sales
 - Top 2 customers by total sales
- **Time-Based Sales Analysis:**
 - Sales by day of the week (to determine peak days)
 - Sales by time of day (morning, afternoon, evening, night)
- **Sales Rep Performance:** Ranked list or chart showing sales reps by their total sales and quantity sold.

3. Interactive Filtering & Slicers

- **Slicers:** Add slicers for:
 - Product Category
 - Region
 - Sales Rep
 - Date (Year/Month)

- Time of Day (Morning, Afternoon, Evening, Night)
- **Dynamic Filtering:** Allow the dashboard to update dynamically when filtered by any slicer.

4. Data Visualization

- **Monthly and Yearly Sales Trends:** Line or area chart showing monthly and yearly sales trends.
- **Hourly Sales Distribution:** A heatmap or line chart showing sales distribution by hour of day.
- **Sales by Product Category:** Pie or donut chart displaying the share of total sales for each product category.
- **Sales vs. Returns:** A bar chart comparing total sales and returns across regions.
- **Profit Margin Analysis:** A line chart showing profit margins over time.

5. Dashboard Insights & Analysis

- **Actionable Insights:** Write 3 observations based on the data, like identifying peak sales hours, best-performing products, or sales spikes by day.

6. **Recommendations:** Provide 2 recommendations for sales improvement, such as increasing marketing during peak hours, focusing on high-profit products, or targeting specific customer segments.

There is the database [link](#)