

## **Crafting a Comprehensive Sales Dashboard**

**Objective:** Develop a detailed dashboard to examine sales data, monitor key performance indicators (KPIs), and offer actionable suggestions to enhance sales outcomes.

### **Requirements:**

#### **1. Advanced Metrics and 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 Performers:**
  - 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 and 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 and Analysis:

- **Actionable Insights:** Write 3 observations based on the data, like identifying peak sales hours, best-performing products, or sales spikes by day.
- **Recommendations:** Provide 2 recommendations for sales improvement, such as increasing marketing during peak hours, focusing on high-profit products, or targeting specific customer segments.