**Objective:**

The goal of this project is not just to generate charts, but to **draw meaningful insights** from the data, just as a business analyst would do when presenting findings to management.

**Project Dataset Summary**

The dataset provided (retail\_sales.csv) contains **3,000 retail transactions** from a fictional store recorded in the year **2023**. Each row represents a **customer order** with details about the product sold, customer, region, sales value, and profitability.

**Dataset Fields**

* **OrderID** → Unique identifier for each transaction.
* **OrderDate** → Date of the order (spread across 2023).
* **CustomerID** → Unique customer reference.
* **Region** → Sales region (East, West, North, South).
* **Category** → Product category (Furniture, Technology, Office Supplies).
* **SubCategory** → Subdivision of the category (e.g., Chairs, Phones, Binders).
* **Product** → Specific product name (e.g., Chair A, Laptop B).
* **Quantity** → Number of units purchased.
* **UnitPrice** → Price per unit of the product.
* **Sales** → Total sales value (Quantity × UnitPrice).
* **Profit** → Profit earned from the sale (5%–25% of Sales).

**Execution Steps:**

1. **Data Preparation**
   * Load the CSV file using pandas.
   * Find out the Number of Rows, Columns & data types
   * Check missing values, datatypes, duplicates.
   * Do Describe of the data & record your inference
   * Convert OrderDate into datetime, extract Year/Month.
2. **Univariate Analysis**
   * Distribution of Sales, Profit, Quantity.
   * Find the Most frequent categories/subcategories.
3. **Bivariate Analysis**
   * Compare Sales vs Profit (scatterplot).
   * Boxplot: Profit by Region.
   * Lineplot: Monthly sales trend.
4. **Multivariate Analysis**
   * Heatmap of correlation between numeric variables (Quantity, Sales, Profit).
   * Grouped analysis: Sales by Region & Category (pivot + heatmap).
5. **Business Questions to Answer**
   * **Understand sales distribution**: Which product categories are most profitable?
   * **Regional performance**: Which region performs best in terms of sales?
   * **Profitability insights**: Are higher sales always leading to higher profits?
   * **Seasonal trends**: Which months show seasonal spikes in sales?
   * **Customer trends**: Identify frequent customers and their contribution to revenue.
6. **Data-driven business decisions**: Recommend strategies such as focusing on profitable categories, boosting underperforming regions, or identifying high-value customers.

**Deliverables**

Submit:

1. **Jupyter Notebook** with analysis, insights, and visualizations.
2. **1-page business summary** (Markdown or Word) interpreting the charts in plain English.