**Case Study**

**Dataset :**



**Objective**: Identify white space opportunities in sales where customers, product categories, or regions have potential for growth.

Note: Feel free to make any required assumptions where data is inadequate or ambiguous.

**Tools Required**:

* Python (for data exploration and preprocessing)
* Tableau or PowerBI (for dashboard development)
* PowerPoint

**Part 1: Python Analysis (Exploratory Data Analysis & Insights)**

**Instructions:**

* Use Python (Pandas, NumPy, Matplotlib/Seaborn) to analyze the Superstore dataset.
* Perform data cleaning, handling missing values, and feature engineering if needed.
* Identify white space opportunities by answering the following:

**Python Questions:**

1. **Customer & Product Penetration Analysis**
   * Identify customers who have purchased from fewer categories compared to the average customer.
   * Are there high-value customers who purchase from limited categories?
2. **Sales & Profitability Trends and Gaps**
   * Which regions have lower-than-expected sales despite a large customer base?
   * Identify customers who frequently purchase but have missed certain product categories.
3. **Market Basket Analysis** 
   * Analyze which product categories are often bought together and Identify opportunities to cross-sell or bundle products.

**Part 2: Tableau/PowerBI White Space Reporting Dashboard**

**Instructions:**

* Build a **dashboard** to visualize white space opportunities.
* Use appropriate **filters, KPIs, and interactive elements**.
* Provide actionable insights based on the Python analysis.

**Part 3: Presentation & Business Recommendations**

**Instructions:**

* The candidate should present their findings in a structured format.
* Explain the approach taken in **Python analysis & dashboard development**.
* Provide **business recommendations** based on insights in a simple power point presentation including presentation of Tableau/PowerBI dashboard created