# **Introduction:**

The Superstore dataset provides essential information regarding Sales Performance Analysis of a Retail Store Chain. By analyzing this dataset, I gain insights into the sales performance across all stores, including sales revenue, sales growth rate, and average transaction value. Therefore, I believe this dataset serves as a valuable resource for addressing my project's objective of analyzing factors influencing obesity prevalence.

# **Data Analysis:**

Using R I have removed missing values, to ensure accuracy in my analysis and removed some columns with less importance to my analysis. I have analysed the columns in this dataset.

This dataset has 25 columns and 51290 rows. I have also analysed what each columns represents and the importance of each column in the Analysis of Sales performance. This dataset has the following columns:

1. Order ID
2. Order Date
3. Ship Date
4. Mode of Shipping
5. Customer Name
6. Segment
7. City, State, Country
8. Market
9. Region
10. Product ID
11. Category, Subcategory and Product Name
12. Sales Revenue
13. Quantity
14. Discount
15. Profit
16. Shipping cost
17. Order Priority and
18. Transaction Value.

# **Visualization Choices:**

I have used 4 visualizations for this dataset.

1. Horizontal Bars: I have used this visualization to explore the data. As the horizontal bars are easy to interpret the trend over time and for comparison. I wanted to compare Sales Revenue, Sales growth, and Transaction Value of the stores in each country. I see that Sales Growth rate is highest in Australia, indicating a strong upward trend in the market there. In contrast, Sales revenue is highest in United states, showcasing its dominance in terms of total sales value.
2. Stacked Bars: As we now have an overview on this dataset, I wanted to know the sales performance of each product. For this purpose, I have used Stacked bars, as this visualization is great to compare subcategories within each group. So here I have categorised into sales growth rate and Sales Revenue and then subcategorised based on each product category. Based on this visualization, it is evident that Office Supplies have highest sales, indicating their strong market presence. Conversely, Furniture lags with significantly lower sales, suggesting potential areas for improvement or revaluation within this category.
3. Density map: The density map, which displays store locations and allows for filtering by store attributes such as store size and customer demographics, reveals that both the US and Europe are home to many stores. The bubble sizes indicating sales suggest that some stores in these regions achieve higher sales volumes, pointing to strong market activity and possibly established customer bases in these areas.
4. Time series Graph: I have generated line graph comparing the sales growth of each product category over time, and allows users to filter by store location, product category, and customer demographics. Notably, technology shows a significant upward trajectory starting from 2012, suggesting growing demand and potential for continued expansion in this sector."

# **Recommendations:**

Based on the visuals, focusing on the leading sales category of Office Supplies and the significant growth in technology sales since 2012, the retail chain should maintain its strong position in Office Supplies through product innovation and customer experience improvement. Additionally, investing in technology products and staff training can drive further sales growth and market expansion. Implementing these strategies can enhance the retail chain's sales performance.

# **Conclusion:**

In conclusion, the visual analysis of the retail chain's performance across different categories and regions reveals clear opportunities for growth. By capitalizing on the strengths in Office Supplies through product innovation and customer experience enhancements and leveraging the substantial growth in technology sales with focused investment and staff training, the retail chain can continue to boost its sales performance. These targeted strategies have the potential to strengthen the company's market share and drive long-term success across its various product categories and regional markets.