**Project #03**

**Tableau for Business Analytics:**

**Creating insightful dashboards with Tableau**

**Part A: Due Date: November 15 (Friday, 11:59 PM)**

**Total Points: 50 Points**

**Part B: Due Date: November 22 (Friday, 11:59 PM)**

**Total Points: 50 Points**

**Part C: Due Date: December 6 (Friday, 11:59 PM)**

**Total Points: 50 Points**

* **(Individual) Assignment:** Gain hands-on experience with Tableau and become familiar with the interface and tools, practicing various drill-down and filtering techniques to generate insight into data. **Use the “USA Superstore” Data Set in Tableau.**
  + **Please download the “USA Superstore” Data Set from Canvas.**
* For each question, use the hints/listed components to create a visualization which will provide the information needed to answer the question. **Each question should be on visualization.**
* **Make sure you include all listed components in order to receive full credit for each question.**

**\*Import Note:**

* + **You will use the USA Superstore Dataset for this project.**

\*\*How to submit your works

1. Submit your Tableau file to the Canvas submission area.
2. Provide a screen shot of the completed visualization in a Word file (including any filters) from which you got your answer(s).

**Part A: Due Date: November 15 (Friday, 11:59 PM)**

**Total Points: 50 Points**

**Question #1:**

* Which region has the highest sales (sum) in 2024?
* What are the total sales for that region in 2024?

**Question #2:**

* Present sales and profit data together in a single chart and recommend the most suitable chart type for comparing both metrics.
* Are sales and profit consistently correlated across different states?
  + Yes\_\_\_\_ , No \_\_\_\_\_\_\_

**Question #3:**

* Which customer segment has both the highest sales and profit, separately in 2023 and in 2024?
* Are the sales volume showing an upward trend from 2017 to 2020?
* Please suggest the most appropriate chart type for analyzing trends.
* Note: Please use the “Order Date” dimension to select a specific year**.**

**Question #4:**

* Which Product Sub-Category had the highest total sales in 2021 and 2024? Additionally, which Product Sub-Category had the highest profit?"
* Is there an upward trend in profit for the Copier Product Sub-Category from 2021 to 2024? What about sales?
* Please suggest the most appropriate chart type for analyzing trends related to this question.

**Question #5:**

* What was the Profit on Phones (Phone is one of Sub-category under Technology Category)?
* Which city has the highest profit on Phones Sub-category?
* Please suggest the most appropriate chart type for this question.

**Question #6:**

* What was the profit ratio for Belkin products in the Category or Sub-Category?
  + You should include Category, Sub-Category, and Product Name (Please drag and drop those three from Dimensions)
* Which Belkin product has the lowest profit ratio? Provide the Product Name and its profit ratio.
* Recommend the most suitable chart type for this analysis."

**Question #7:**

* **Use a Highlight Table**
* Which Ship Mode in (Phones, Storage, Supplies, and Tables) Sub-Category has the worst or the highest (Gross) Profit Ratio?
* And which Ship Mode in Machine Sub-Category has the worst or the highest (Gross) Profit Ratio?
* **Required components:**
  + A.) Use a highlight table displaying all information needed to answer the question
  + C.) Each bar labeled with total Gross Profit Ratio.

**Question #8:**

* **Use a geographic map**
* Which state has the worst Profit on Phones in the Corporate Customer Segment that were Shipped in 2024?
* Important Note: You should use filters for Customer Segment, Ship Date (you can find Ship Date under Order Dimension), and Sub-Category.
* **Required Components:**
  + A.) A map displaying information required to answer the question
  + B.) A color scale indicating Profit
  + C.) Each state labeled with state name
  + D.) Each state labeled with Profit

**Check the next pages**

* **Part B: Due Date: November 22 (Friday, 11:59 PM)**
* **Total Points: 50 Points**

**Question #9:**

1. You want to find out which product items are most popular in 2024 so that you can possibly create a marketing campaign for those items or consider discontinuing the items.

**Note: Please use the “Order Date” dimension to select a specific year.**

1. Find the top 10 or 20 Product Names by Sales in 2024?

* **Recommended Components:** 
  + 1) Vertical or Horizontal Bar Char,
  + 2) Each product labeled with the total sales amount,
  + 3) Show Filter Function.

1. Is the sales information enough for you to make your final decision for the marketing campaign?

**Question #10:**

1. You want to find out which product items are most profitable in 2024 so that you can possibly create a marketing campaign for those items or consider discontinuing the items.
2. Find the top 10 or 20 Product Names by Profits in 2024?
3. Recommend the most suitable chart type for this analysis.

**Question #11:**

1. You want to know who your top customers are within each region.
2. Find the top 10 or 20 Customer Names by Sales within each region. Which customer is ranked #1 in the Central and South regions?

* **Recommended Components:** 
  + 1) Vertical or Horizontal Bar Char,
  + 2) Each customer labeled with the total sales amount,
  + 3) Show Advanced Filter Function.

1. Does the top 10 Customers generate profit for the Superstore?
2. What ad-hoc report or analysis do you need to create or perform?

**Question #12:**

1. What is the percent of total Sales for the ‘Corporate’ Customer Segment in November of 2024?
2. What is the percent of total Profit for the ‘Corporate’ Customer Segment in November of 2024?

* **Required Components:** 
  + 1) Vertical or Horizontal Bar Char,
  + 2) Each month labeled with the total profit amount,
  + 3) Each month labeled with the percent of total profit amount,
  + 4) Show Filter Function.

**Question #13:**

* If sales are expected to increase by 50% next year, what would be the estimated total sales for the Consumer Segment in 2025?

**Question #14:**

* **Please generate charts for both sales and profit using the Forecast model from the Analytics section.**

**Question #15:**

* **What percentage of the total profits do the top 10 customers by sales represent?**