

Lesson 02: Sales Data Analysis

Overview

In this exercise, you will learn how to create basic charts in Tableau using sales data. The focus will be on connecting to data and creating simple visualizations, allowing you to grasp the foundational aspects of chart-making in Tableau. You will gain a fundamental understanding of chart-making in Tableau, making it an ideal starting point to explore data visualization techniques and tools.

Instructions

- Review the learning materials in Lesson 02
- Carefully read the situation, task, actions, and result sections to grasp the assignment fully
- Complete and submit your assignment via the Learning Management System (LMS)
- Use **Sample - Superstore-2017-2020** dataset provided in the Reference Material section on LMS

Situation

You are a data analyst working for Walmart with stores in various regions. Your manager has provided you with a dataset containing monthly sales data for different product categories across the company's stores. The company wants to understand sales trends and identify top-performing products, regions, and sales performance by shipping mode to optimize sales performance and revenue generation.

Task

As a data analyst at Walmart, import the given dataset into Tableau and create a line chart to understand sales trends by month and sub-category, identifying the highest-selling product and its peak sales month. Utilize a bar chart to identify top-performing products and regions, focusing on the lowest-ranked region by sales. Create a heat map to analyze sales performance by shipping mode and

region, optimize profit performance with an area chart, and visualizing sales distribution by product categories using a pie chart.

Action

1. Data connection

- Import the **Sample - Superstore-2017-2020** dataset into the Tableau Desktop
- Drag **Orders** from **Sheets** to **Drag tables here**

2. Create a Line chart for understanding sales trends

- Place **Order Date** into **Columns** and **Sales** into **Rows**
- Right-click on **Order Date** to change it to **Month**
- Drag and drop **Sub-Category** into the **Color** section in the **Marks** card
- Analyze this chart to find the maximum sold product name, month, and quantity during the overall duration

3. Create a Bar chart for identifying top-performing products and regions

- Place **Product Name** into **Columns** and **Filter** them by selecting the initial seven products
- Place **Sales** into **Rows**
- Right-click on **Sales** to select **Quick Table Calculation** and set it to the **Rank** option
- Drag the **Region** field into the **Color** section in the **Marks** card to display sales performance by region within the chart
- Analyze the chart to find the lowest-ranked region by sales across the overall **Product Name**

4. Create a Heat map for analyzing sales performance by shipping mode and region

- Place **Ship Mode** into **Columns** and **Sub-Category** into **Rows**
- Place **Sales** into the **Color** section in the **Marks** card to represent sales performance intensity
- Click on the box (top right corner) named **SUM(Sales)** to change the color of the Heat map according to your choice like Orange-Red
- Analyze the Heat map to find the top two categories by maximum sales performance throughout all the classes

5. Create an Area chart for optimizing profit performance

- Place **Ship Mode** into **Columns** and **Profit** into **Rows** and click on the **Marks** card to change it to the **Area** option
- Drag the **Region** field into the **Color** section in the **Marks** card
- Analyze the chart to find the region with the maximum profit in **Standard Class**

6. Create a Pie chart for sales distribution by product categories

- Place **Sub-Category** into **Columns** and **Orders(Count)** into **Rows**
- Click on the **Show Me** panel and select the **Pie Chart** option
- Drag and drop **Sub-Category** into the **Label** section in the **Marks** card
- Analyze and find the sub-categories with the minimum and the maximum **Count of Orders**

Result

Your submission should include screenshots illustrating each step performed in the Word document showcasing different kinds of charts and trends. Derive the key insights from the analysis to include the top performer products and regions based on revenue and quantity sold. Upload the final file to the Learning Management System (LMS).

Rubric

Your submission will be evaluated based on the following key criteria, each representing a crucial aspect of the project. These criteria are:

Criteria	Complete or Incomplete
Data connection: Check if the dataset is imported to the Tableau Desktop	
Line chart for understanding sales trends: Check if all the steps are performed in the correct order and whether the maximum sold product is found	

<p>Bar chart for identifying top-performing products and regions:</p> <p>Check if all the steps are performed in the correct order and whether the lowest ranked region is found</p>	
<p>Heat map for analyzing sales performance by shipping mode and region:</p> <p>Check if all the steps are performed in the correct order and whether the top two categories by maximum sales performance are found</p>	
<p>Area chart for optimizing profit performance:</p> <p>Check if all the steps are performed in the correct order and whether the region with the maximum profit in the standard class is found</p>	
<p>Pie chart for sales distribution by product categories:</p> <p>Check if all the steps are performed in the correct order and whether the sub-categories with the minimum and the maximum count of orders are found</p>	