Lesson 04: Harnessing Tableau for Dynamic Data Decisions

Overview

In this exercise, you will learn to use the box plot and trend lines. Using real-world scenarios, the lesson emphasizes practical application. You will explore how joins, box plot, and trend lines can effectively summarize data. The hands-on approach aims to develop proficiency in using them for efficient decision-making.

Instructions

- Use **monthly_sales_data** and **total_sales_data_month_over_month** for your reference
- Work through all questions individually or within your group
- Divide your time evenly among the questions to ensure comprehensive understanding
- Utilize tableau official documentation and online resources to enhance your problem-solving abilities

Task

You work as a data analyst and you employ box plots in tableau to examine the variability and central tendency of monthly sales across different product categories, identifying outliers and trends. Simultaneously, you use trend lines to track and forecast sales performance over several years, distinguishing seasonal patterns and growth trajectories.

1. Sales distribution analysis using Box plots: To identify which product categories exhibit the most variability in monthly sales and to spot any outliers that may indicate unusual sales activity:

- Connect the monthly_sales_data to the data source using Text file
- Open a new sheet
- Drag the Product Category to rows and Sales to columns
- Choose the box-and-whisker-plot from the show me area

2. Sales performance analysis using Reference lines: To assess the consistency of sales across different product categories and identify significant deviations from the average sales performance:

Note: Connect the total_sales_data_month_over_month to the data source using Text file

- Open a new sheet
- Change the graph type to Line graph and drag the Sales to rows and Month to column
- Click on Analytics
- Double click on Reference line
- Choose the Reference as Line, Value as SUM(Total Sales), Label as Computation, Tooltip as Automatic and click OK

Discussion Questions (Optional)

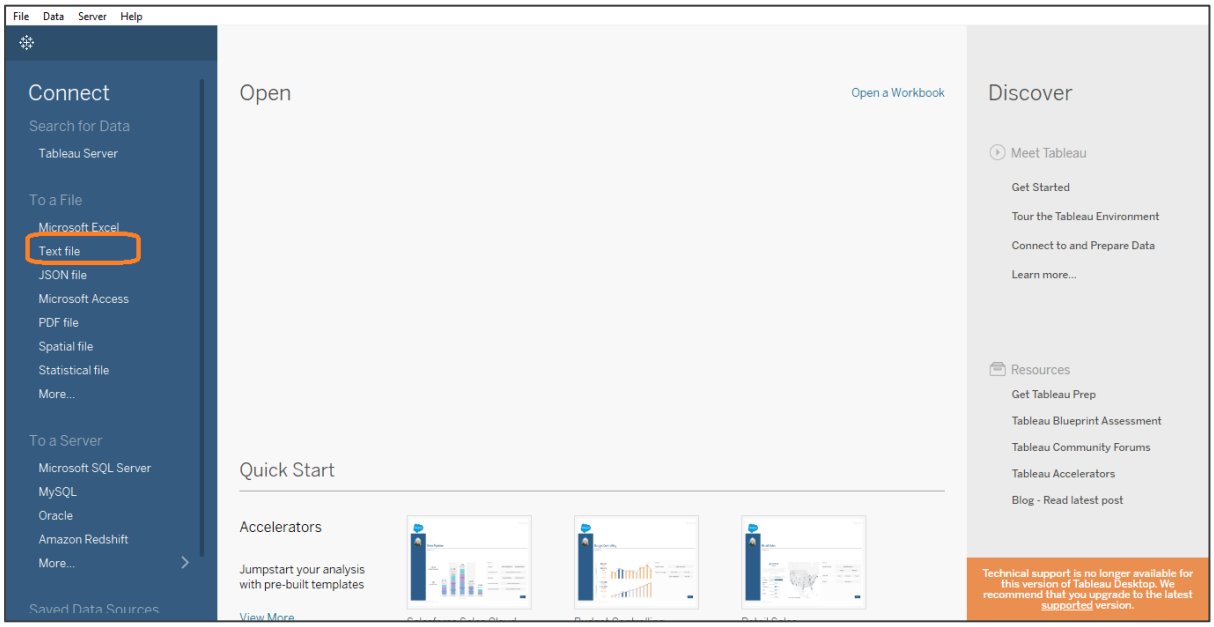
If time permits, discuss the following questions:

- How do Box plots and Trend lines complement each other in providing a holistic view of sales performance across different product categories in an e-commerce context?
- What challenges might an analyst face when interpreting Box plots and Trend lines together in Tableau, and how can these challenges be addressed to make data-driven decisions for inventory planning and promotional strategies?

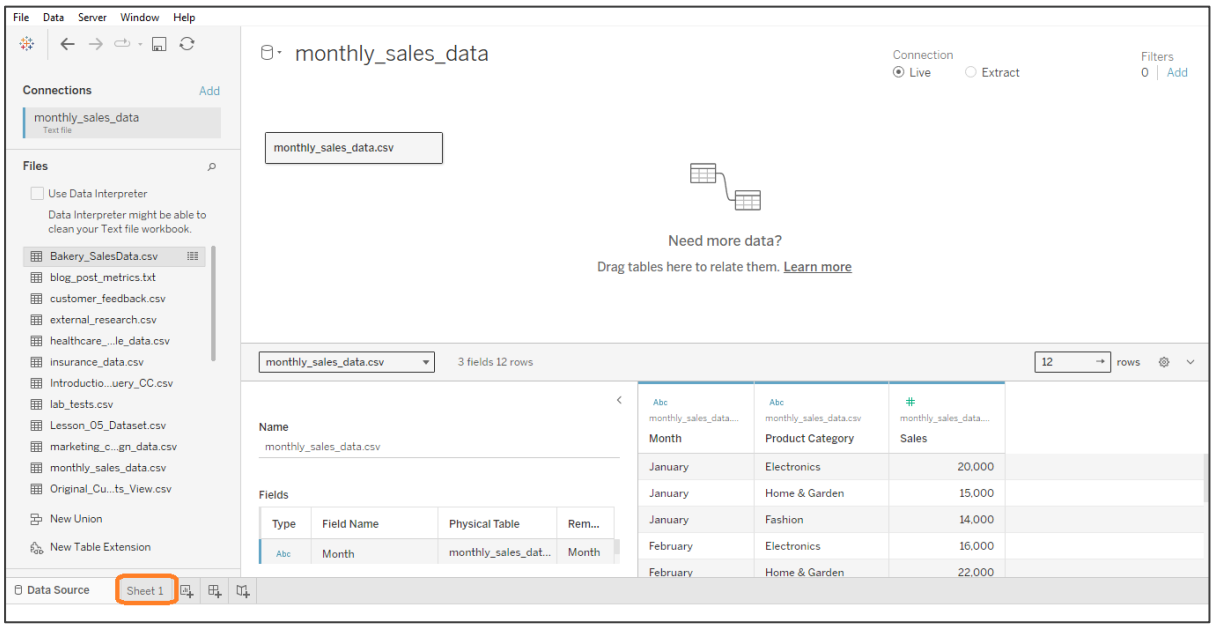
Answer Key

Task 1

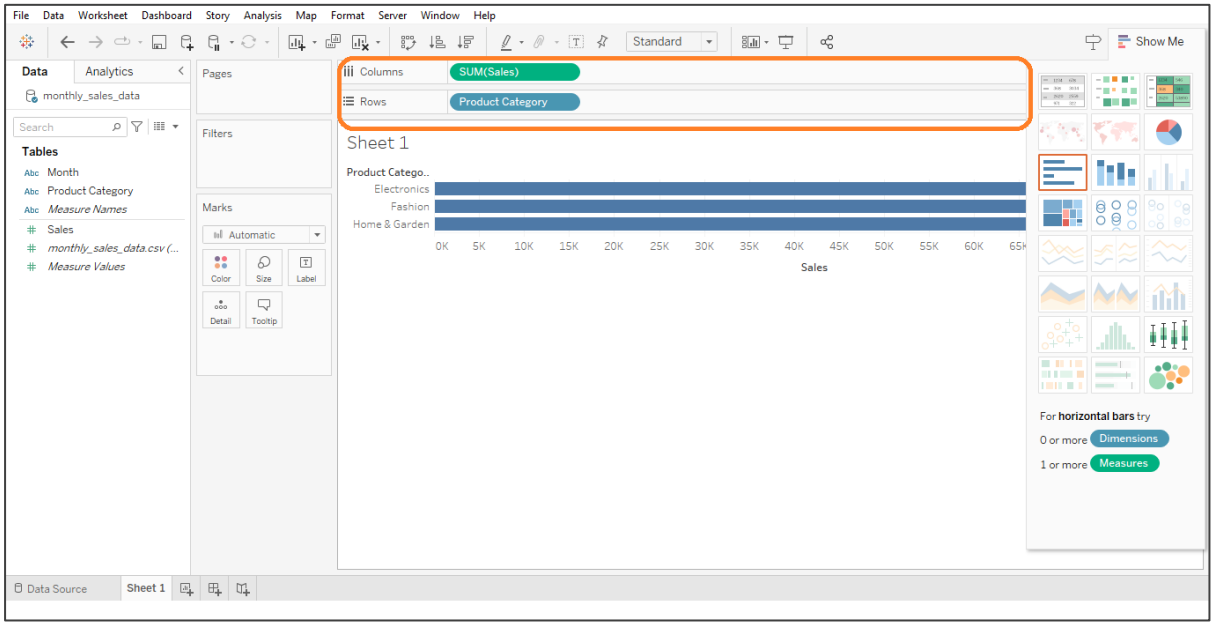
- Connect the **monthly_sales_data** to the data source using **Text file**



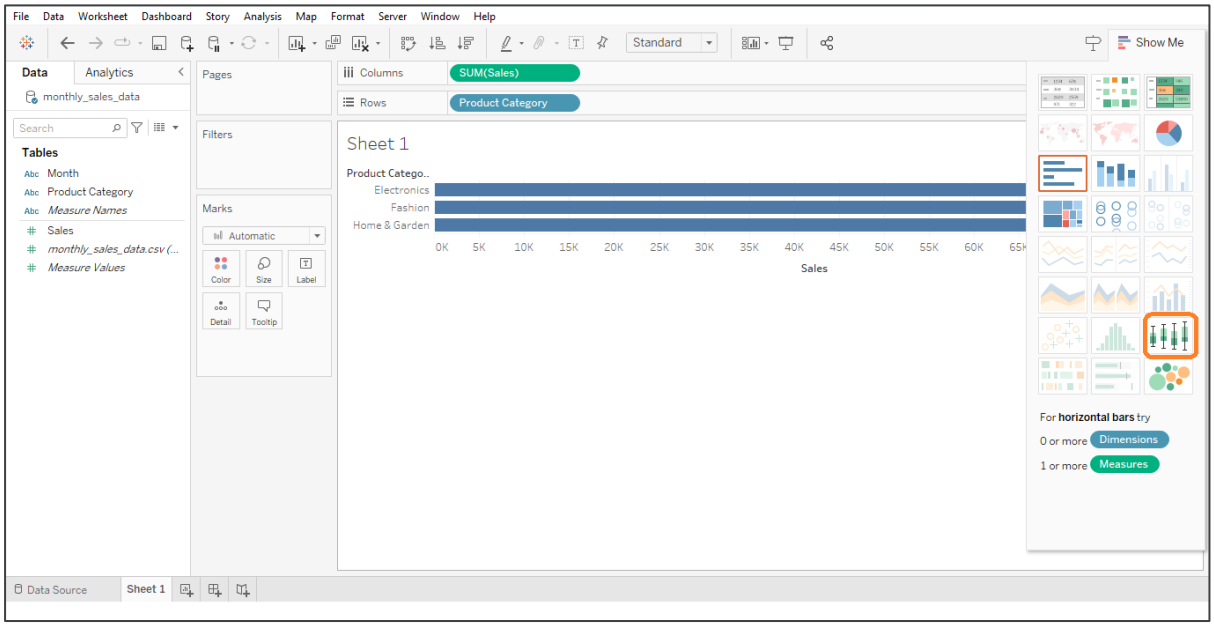
- Open a new sheet



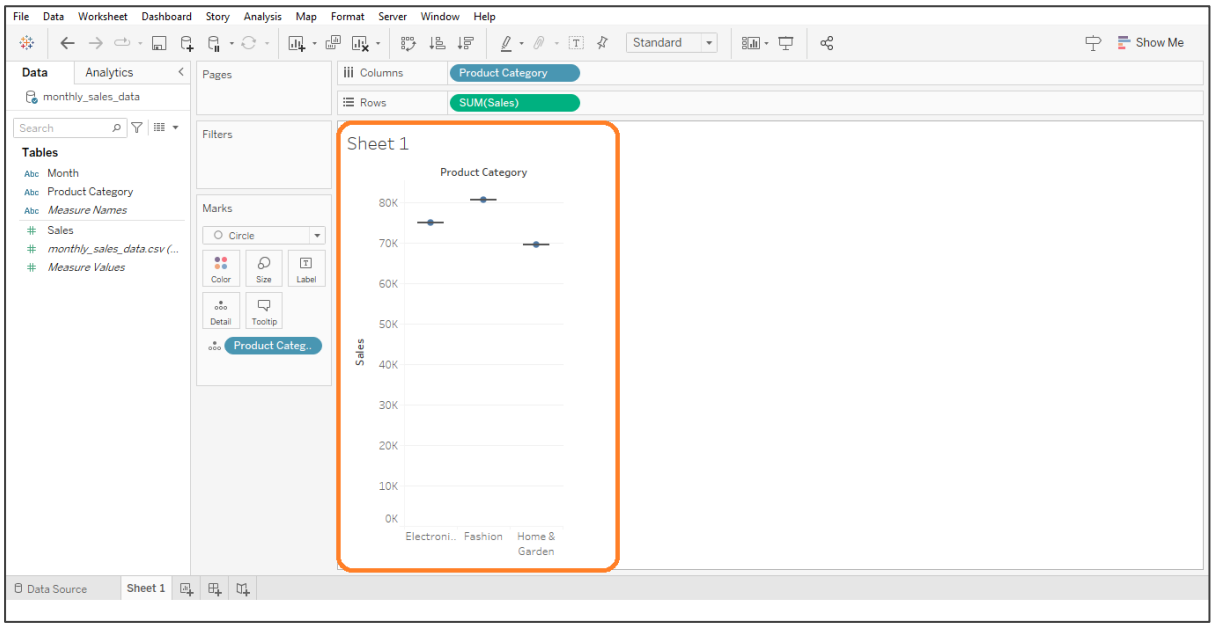
- Drag the **Product Category** to rows and **Sales** to columns



- Choose the **box-and-whisker-plot** from the show me area



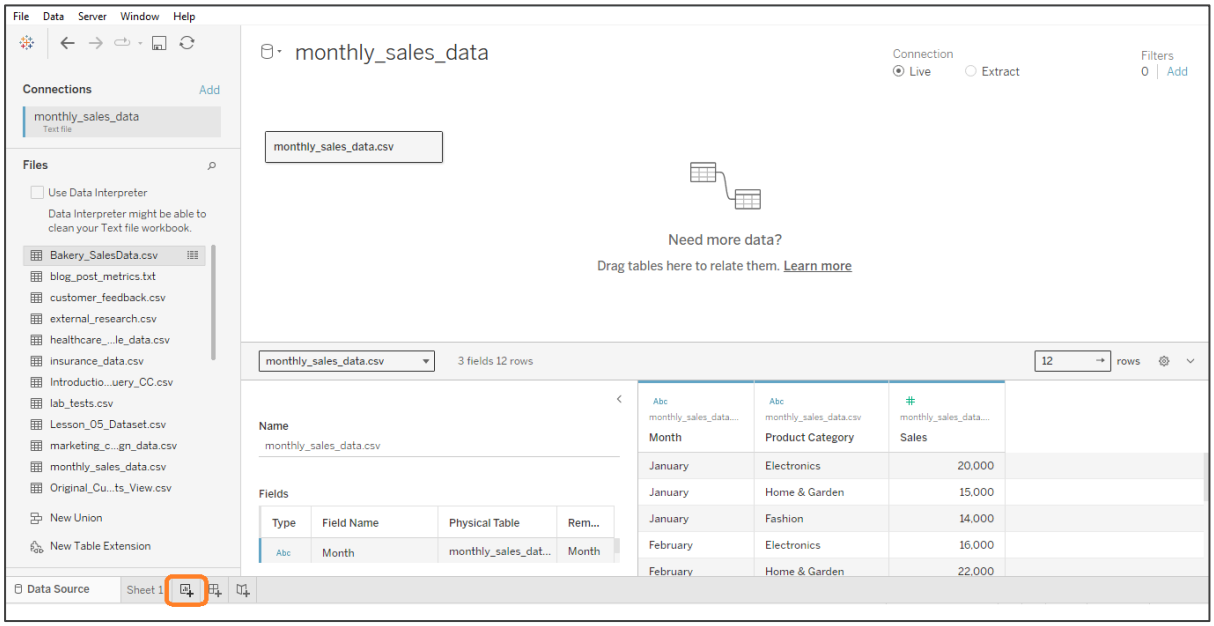
The final output appears as shown below:



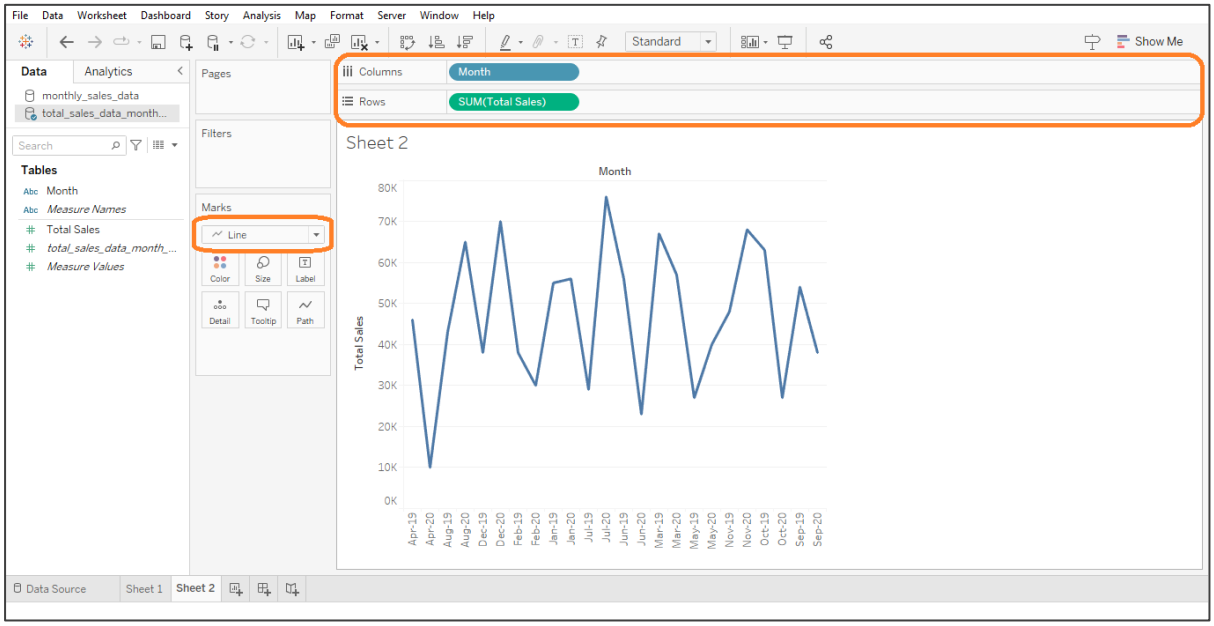
Task 2

Note: Connect the **total_sales_data_month_over_month** to the data source using **Text file**

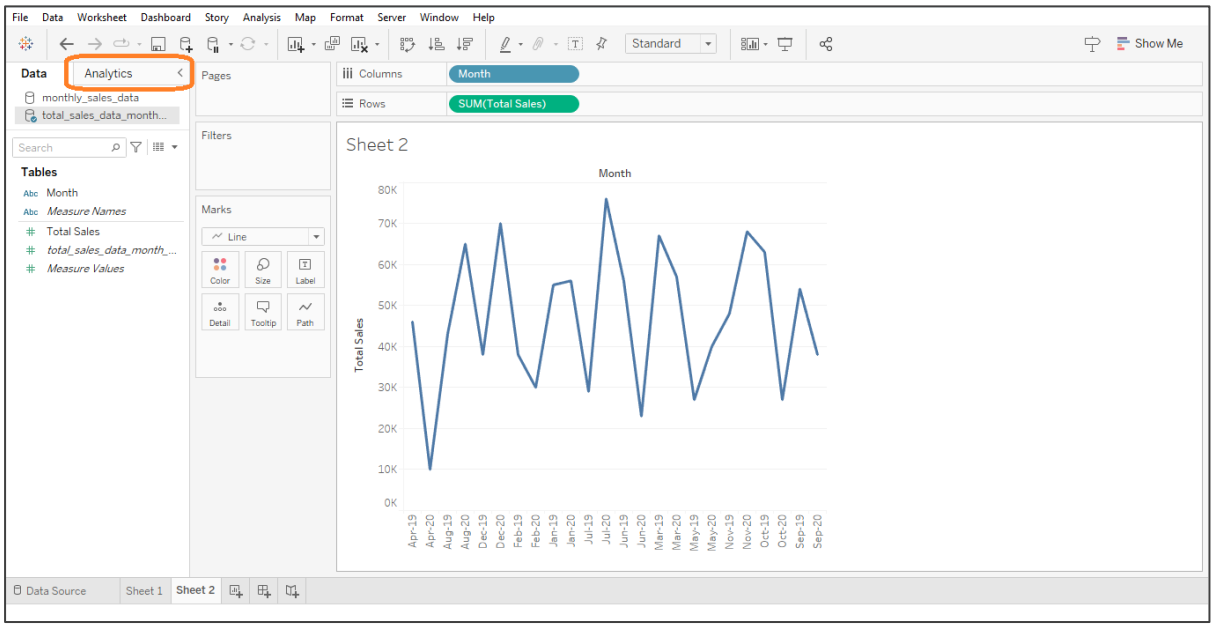
- Open a new sheet



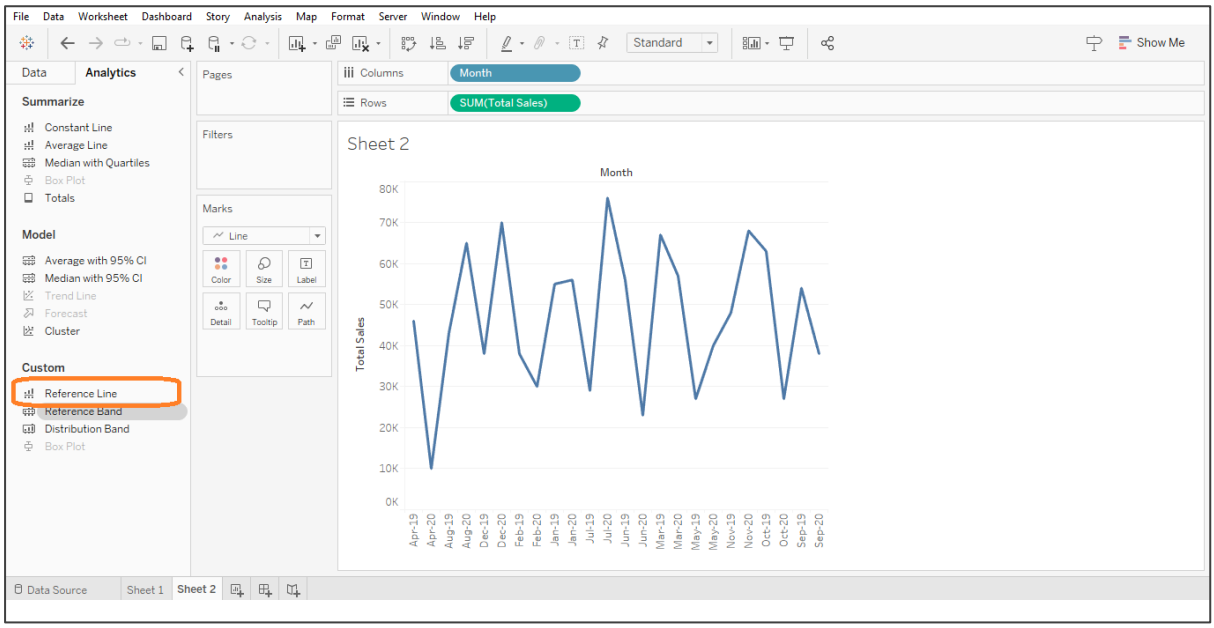
- Change the graph type to Line graph and drag the Sales to rows and Month to column



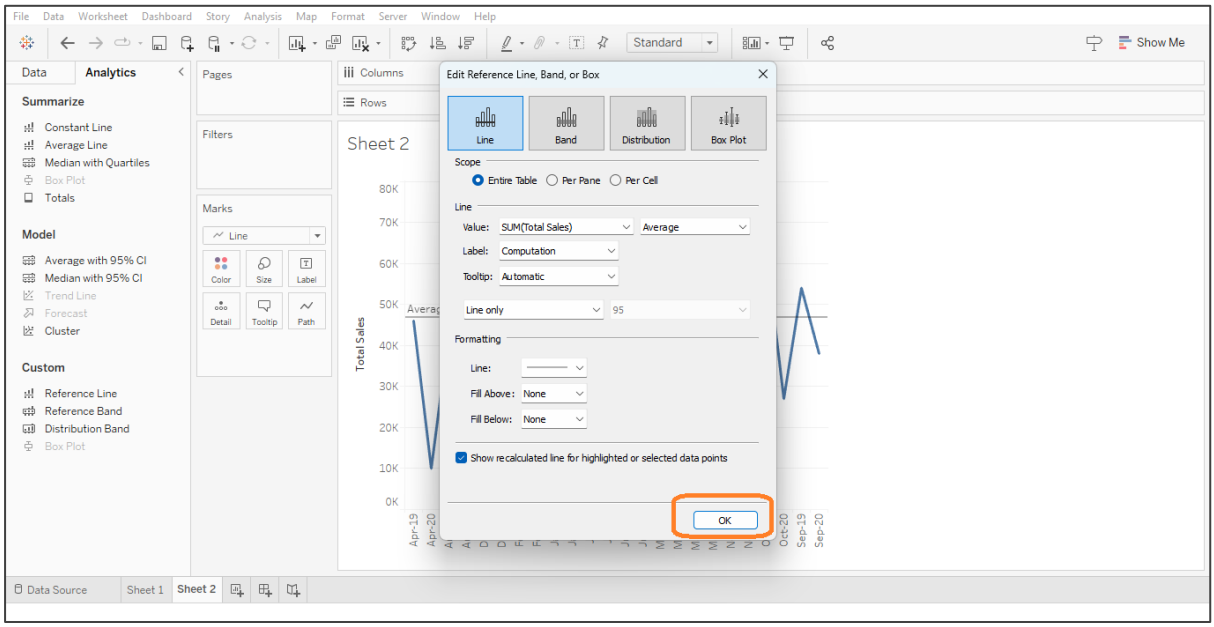
- Click on **Analytics**



- Double click on **Reference line**



- Choose the **Reference** as **Line, Value** as **SUM(Total Sales), Label** as **Computation, Tooltip** as **Automatic** and click **OK**



Note: Hover over the reference line to see the numerical value of average

The final output appears as shown below: