

Lesson 01: Mastering Tableau Unveiling the Power of Visual Analytics

Overview

In this project, you will analyze social media metrics found in multiple files, including .csv, .txt, and .pdf formats. Your goal is to create a detailed overview of social media activity over a designated period. Tableau simplifies the union of data by automatically aligning column names or permitting manual modifications. This process yields a single dataset that offers an integrated perspective of social media interactions across different platforms.

Instructions

- Work through all tasks individually or within your group
- Divide your time evenly among the tasks to ensure a comprehensive understanding
- Utilize the provided datasets to enhance your problem-solving abilities

Tasks

Consider that you are working on a project where you need to analyze social media metrics that are spread across several files: a.csv file with tweet statistics, a.txt file with blog post metrics, and a.pdf file with webpage interaction tracking. Your goal is to produce a single, cohesive picture of every social media exchange during a given period.

1. Import the datasets

- For .csv and .txt files
 - Open Tableau; in the **Connect** section, choose **Text File** for .csv or .txt files and navigate to the file location
 - Select the files **blog_post_metrics** and click **Open** to import it
 - In the **Connections** section, click on the **Add** option and choose **Microsoft Excel**
 - Select the file **tweet_statistics** and click **Open** to import it
- For .pdf files
 - In the **Connections** section, click on the **Add** option and choose the **PDF file**

- Select your **webpage_interactions**, then click **Open** to import it
- In **Scan PDF File**, select **All** or the page that needs to be imported and click **OK**

2. Rename fields and change data types

- For renaming fields
 - In the **Data Source (Connections)**, right-click on the field you want to rename. Here, **webpage_interaction** is renamed.
 - Select **Rename** from the context menu
 - Enter the new name (**webpage_metrics**) for the field and press Enter
- For changing data types
 - In the open a workbook field, right-click on the file (**blog_post_metrics**) and click on **Remove**
 - Drag the Data Source (**Page 1 Table 1**) from the **Connections section** to the canvas or drag it directly to the Data pane to create a new worksheet
 - In **F1**, click on the data type symbol. Choose the new data type (**Date**) from the list of available options.
 - Similarly, change the data types of columns **F2** and **F3** to **Numbers (whole)** and **F4** to **Numbers (decimal)**

Discussion Questions (Optional)

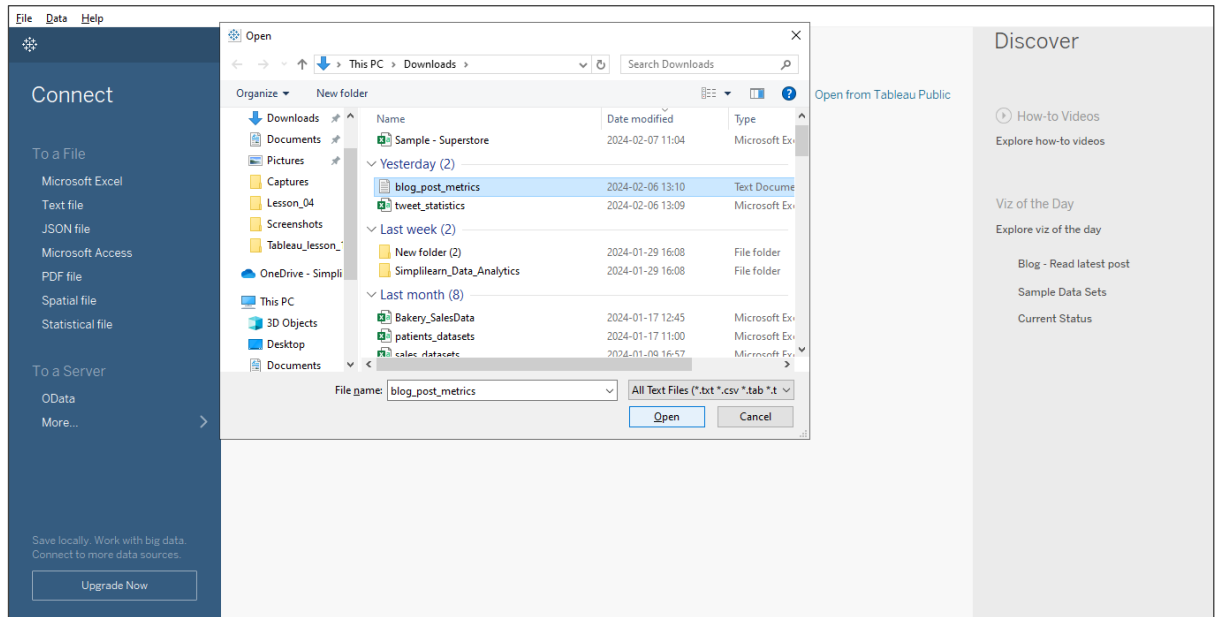
If time permits, discuss the following questions:

- Considering different data formats, how does importing and combining datasets in Tableau affect analysis efficiency?
- Discuss the significance of analyzing social media metrics within specific periods
- Why is it important to ensure that the data types of your fields are correct?

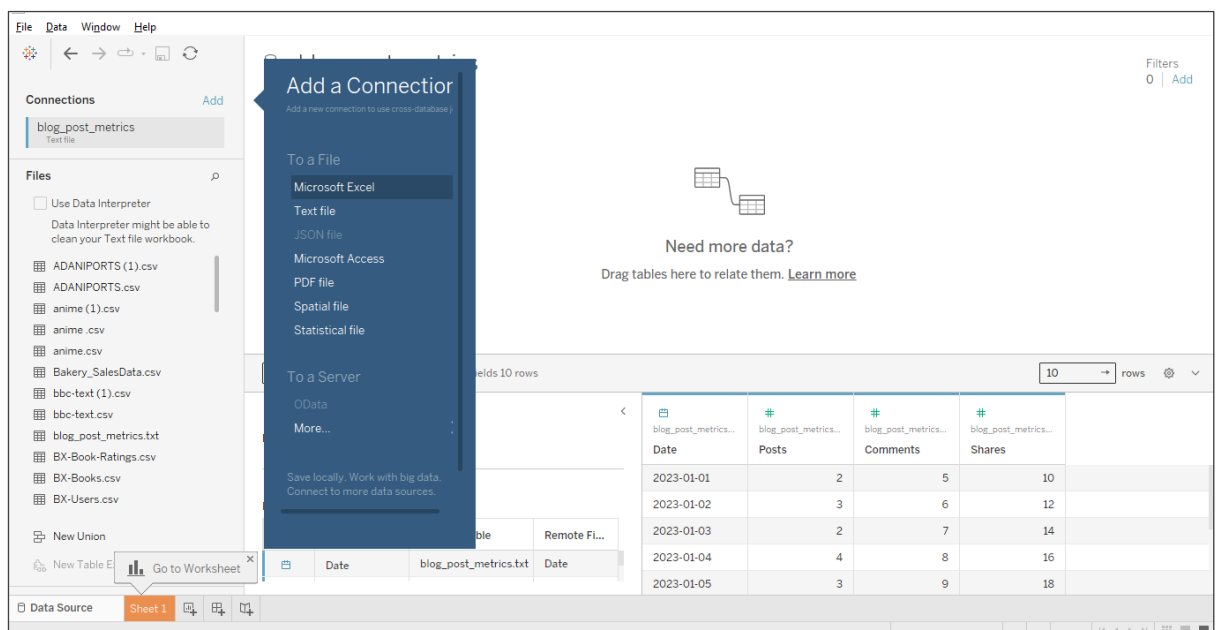
Answer Key

1. Import the datasets

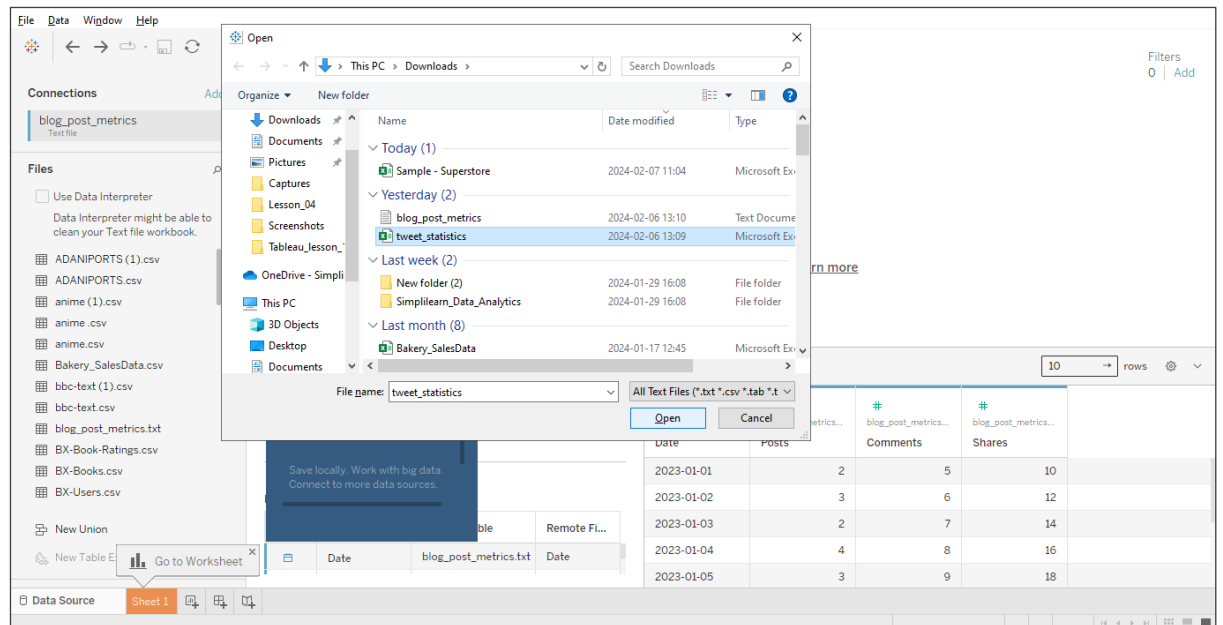
- For .csv and .txt files
 - Open Tableau; in the **Connect** section, choose **Text File** for .csv or .txt files and navigate to the file location
 - Select the file **blog_post_metrics** and click **Open** to import it



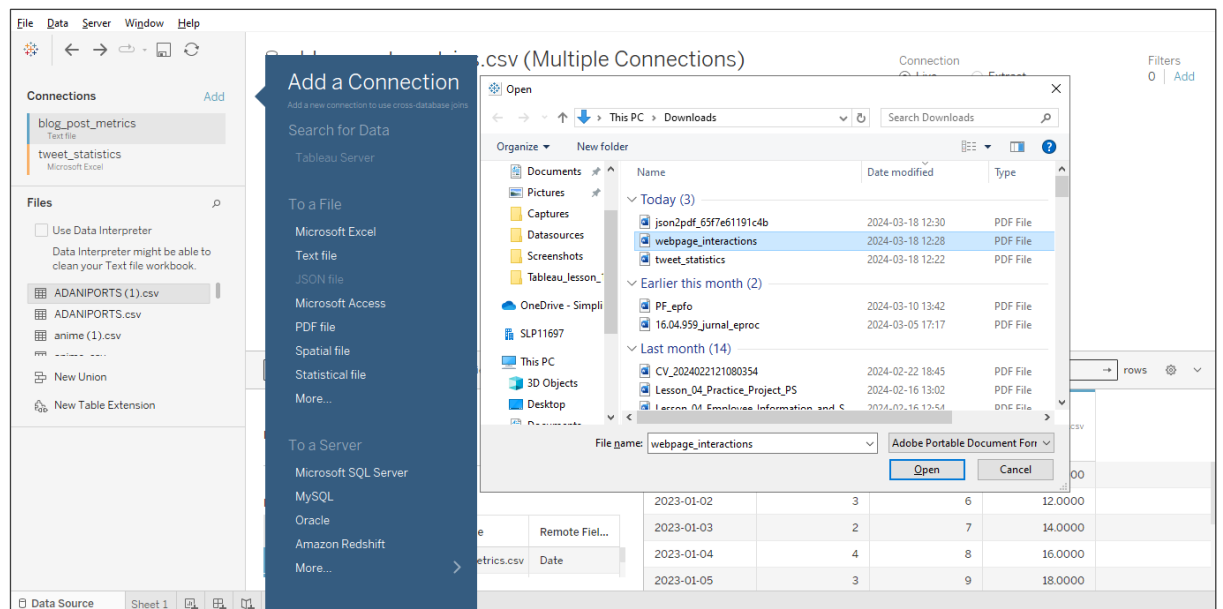
- In the **Connections** section, click on the **Add** option and choose **Microsoft Excel**



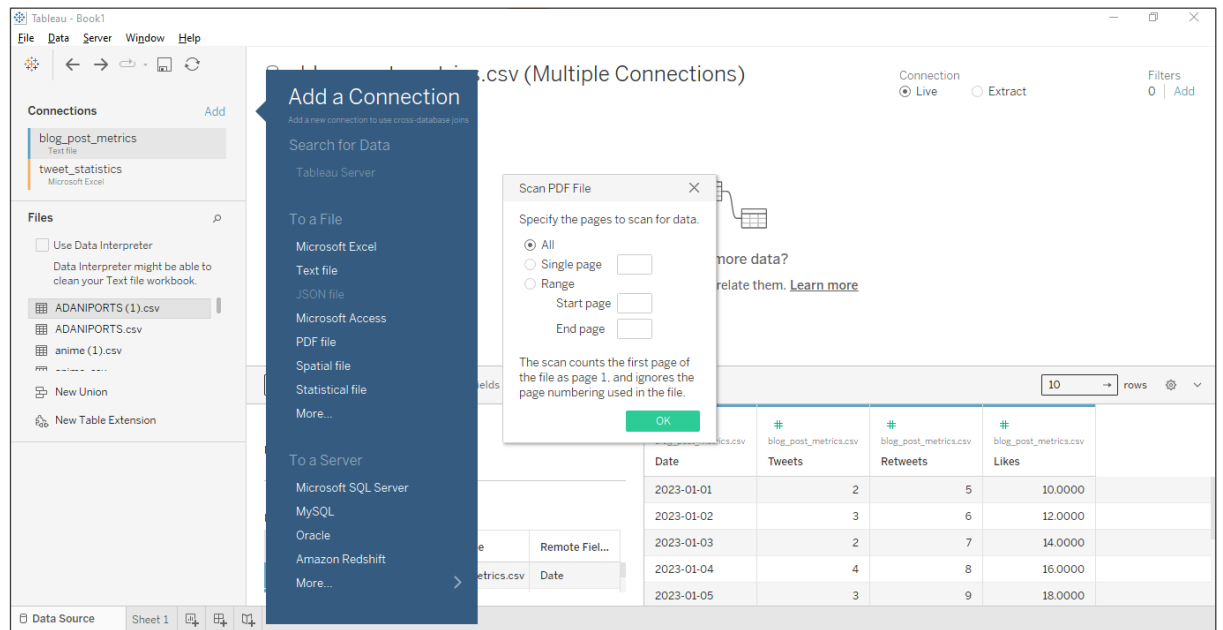
- Select the file **tweet_statistics** and click Open to import it



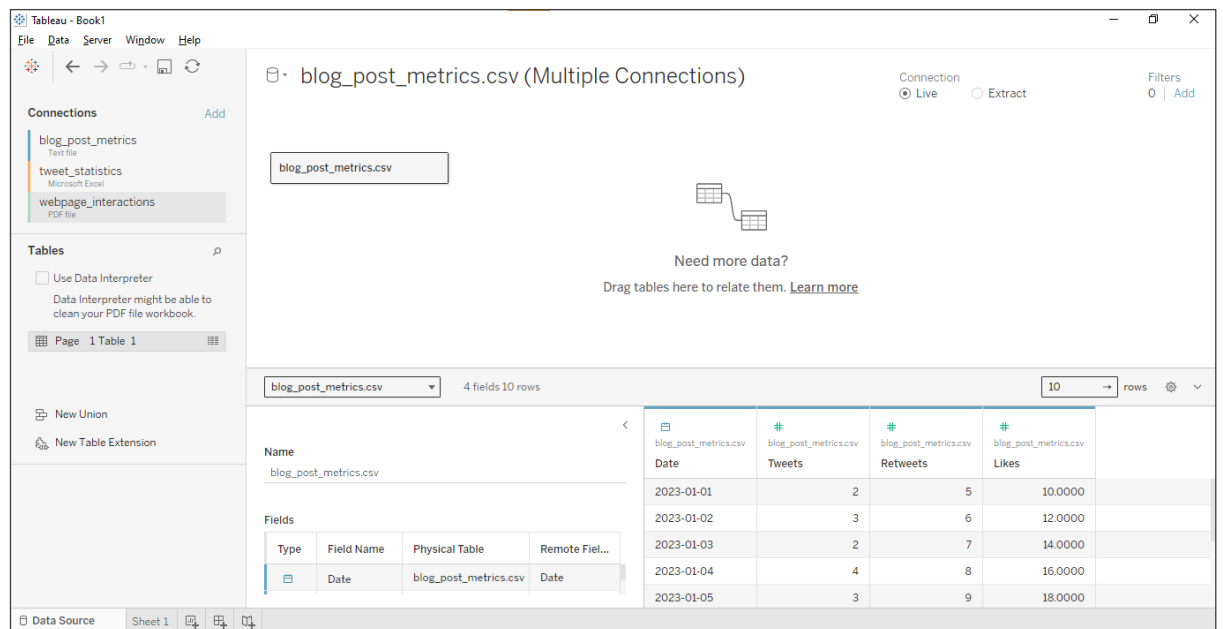
- For .pdf files
 - In the **Connections** section, click on the **Add** option and choose the **PDF file**
 - Select **webpage_interactions**, then click Open to import it



- In **Scan PDF File**, select **All** or the page that needs to be imported and click **OK**

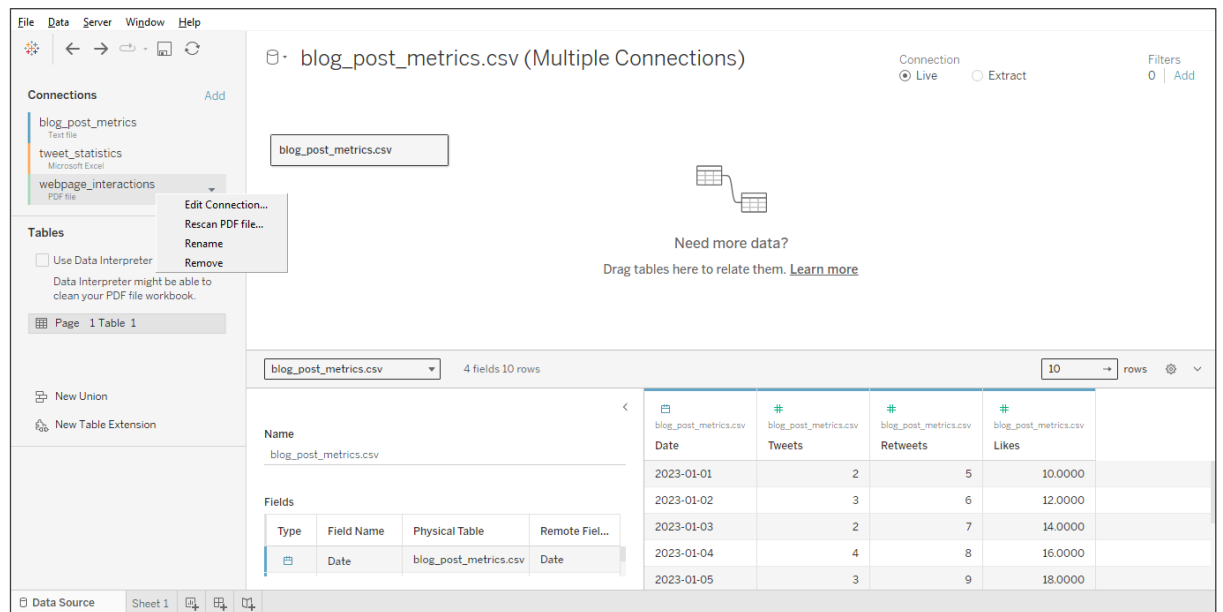


Output of Task 1:

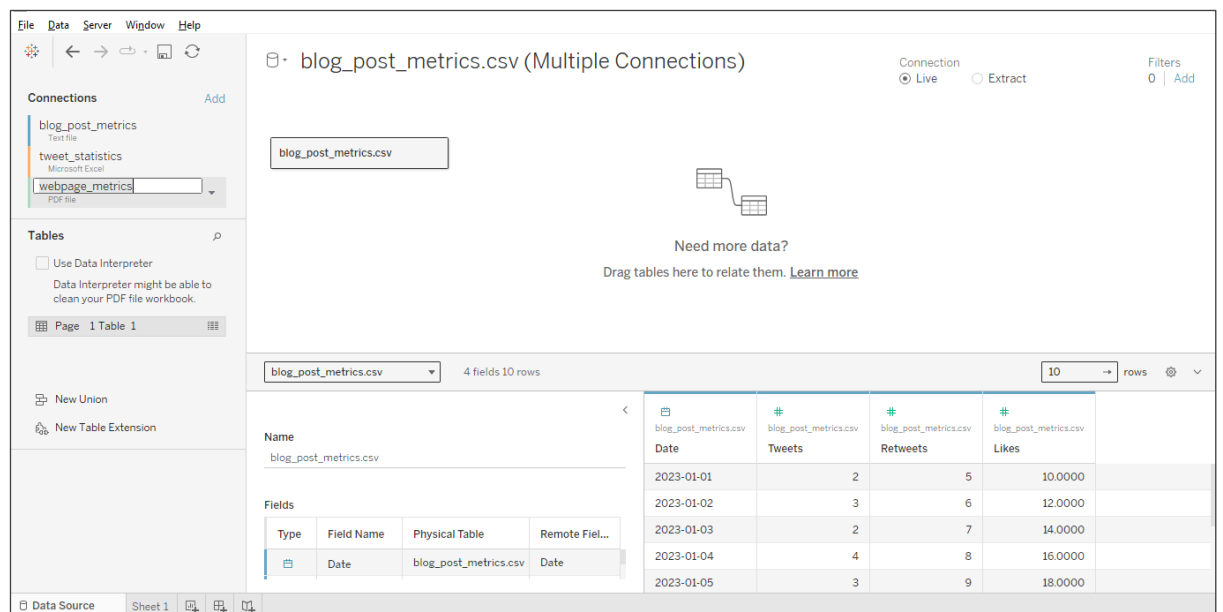


2. Rename fields and change data types

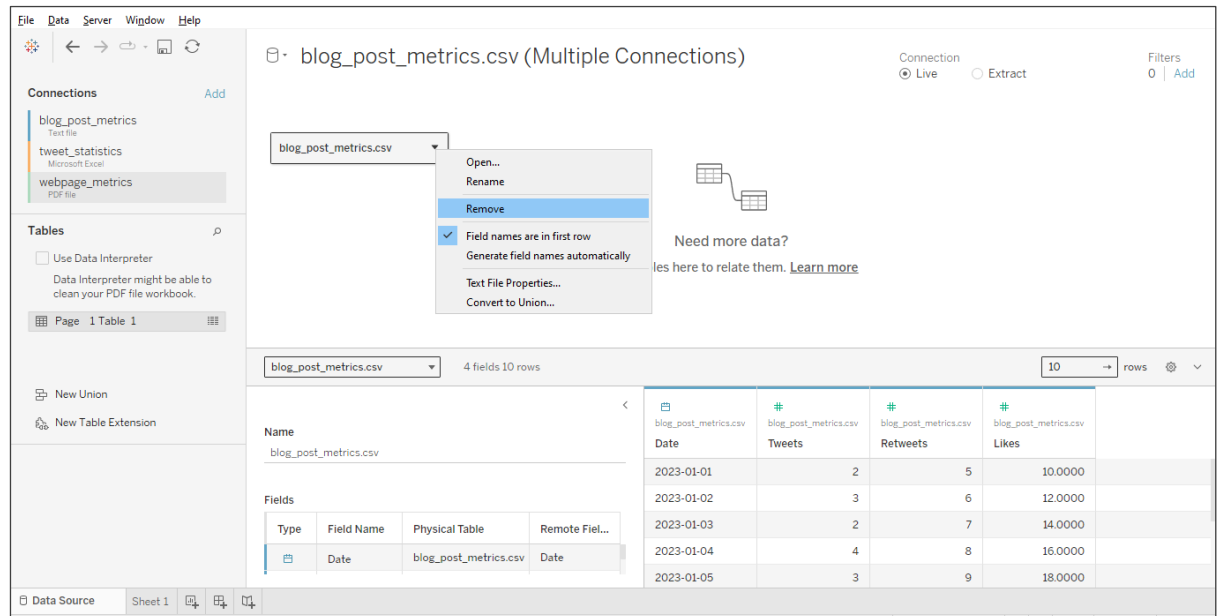
- For renaming fields
 - In the **Data Source (Connections)**, right-click on the field you want to rename. Here, **webpage_interaction** is renamed. Select **Rename** from the context menu.



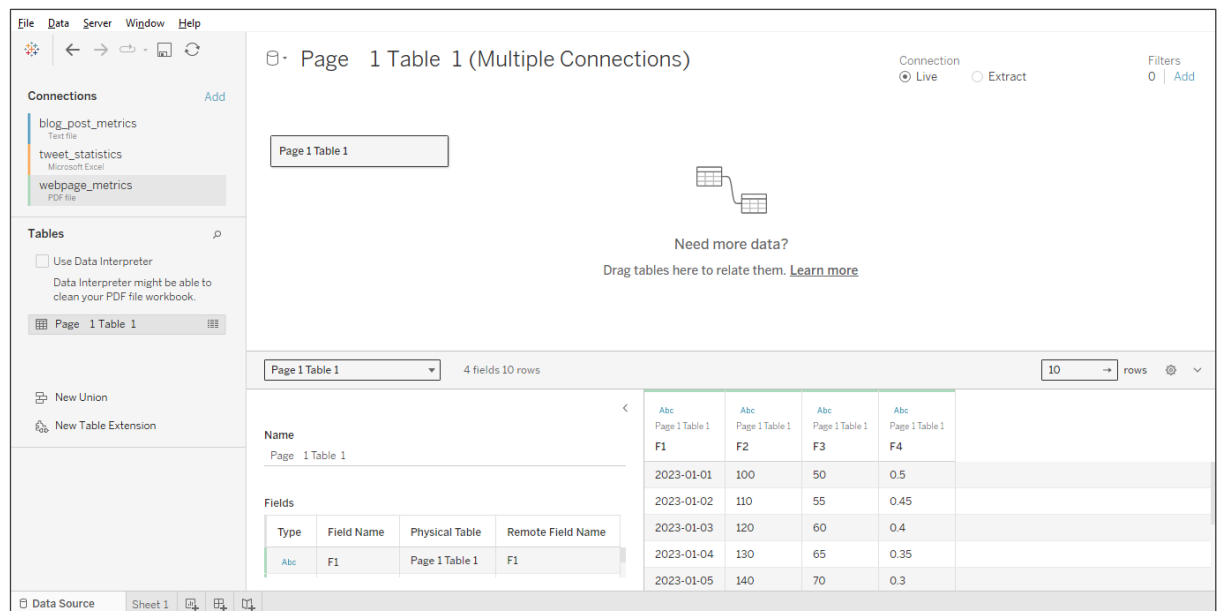
- Enter the new name (**webpage_metrics**) for the field and press Enter



- For changing data types
 - In the open a workbook field, right-click on the file (**blog_post_metrics**) and click on **Remove**



- Drag the Data Source (**Page 1 Table 1**) from the **Connections** section to the canvas or drag it directly to the Data pane to create a new worksheet



- In F1, click on the data type symbol. Choose the new data type **(Date)** from the list of available options.

The screenshot shows the Tableau interface with the 'Page 1 Table 1' data source. A dropdown menu is open for field F1, showing the following options:

- Number (decimal)
- Number (whole)
- Date & Time
- Date** (highlighted)
- String
- Spatial
- Boolean
- Default

The background table shows the following data:

Name	F1	F2	F3	F4
2023-01-01	100	50	0.5	
2023-01-02	110	55	0.45	
2023-01-03	120	60	0.4	
2023-01-04	130	65	0.35	
2023-01-05	140	70	0.3	

- Similarly, change the data types of columns F2 and F3 to **Numbers (whole)** and F4 to **Numbers (decimal)**

The screenshot shows the Tableau interface with the 'Page 1 Table 1' data source. The data types for fields F2, F3, and F4 have been updated. The background table shows the following data:

Name	F1	F2	F3	F4
2023-01-01	100	50	0.50	
2023-02-01	110	55	0.45	
2023-03-01	120	60	0.40	
2023-04-01	130	65	0.35	
2023-05-01	140	70	0.30	
2023-06-01	150	75	0.25	
2023-07-01	160	80	0.20	