Tableau Public Tutorial

Introduction to Tableau Public

Tableau is a leading data visualization and Business Intelligence tool in the market. Tableau Public is for anyone who wants to tell stories with interactive data on the web. It is delivered as a service that allows you to be up and running overnight. With Tableau Public you can create amazing interactive visuals and publish them quickly, without the help of programmers or IT. In this tutorial, we use the World Bank CO2 emission dataset to demonstrate the basic functionalities of Tableau. The dataset is available on GitHub together with this document.

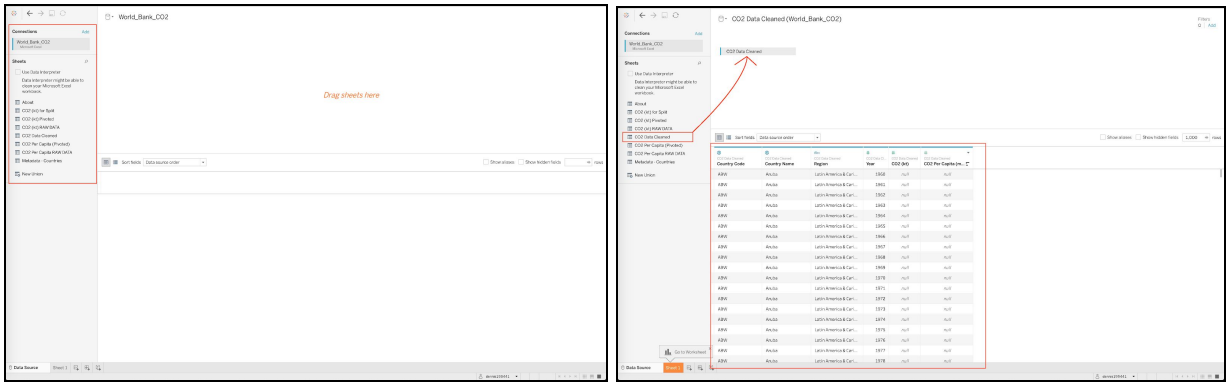
Before you start

Sign up for a tableau public account on https://public.tableau.com/en-us/s/

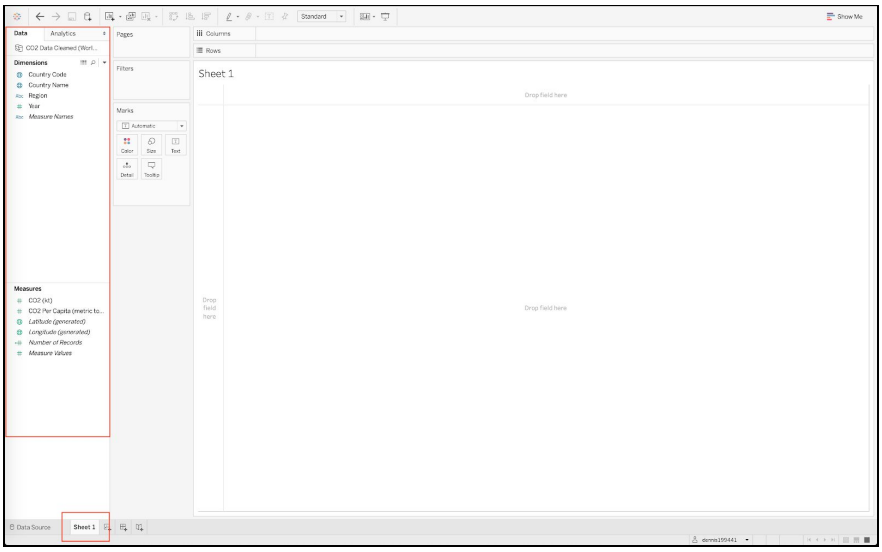
Tableau Public supports both Windows and OS X systems. The installation file can be downloaded from https://public.tableau.com/s/download. An email address is required. The website will detect the system you use automatically to make sure you are downloading the right file.

Data connection

After opening Tableau Public, “Connect” panel is shown on the left. You can select the appropriate data source file. In this tutorial, we use Microsoft Excel as the data source file.



Once you have selected the data source, Tableau will automatically load the file and display the available spreadsheets (left). You can drag a spreadsheet to the main canvas, the content of the spreadsheet is shown below the main canvas (right).

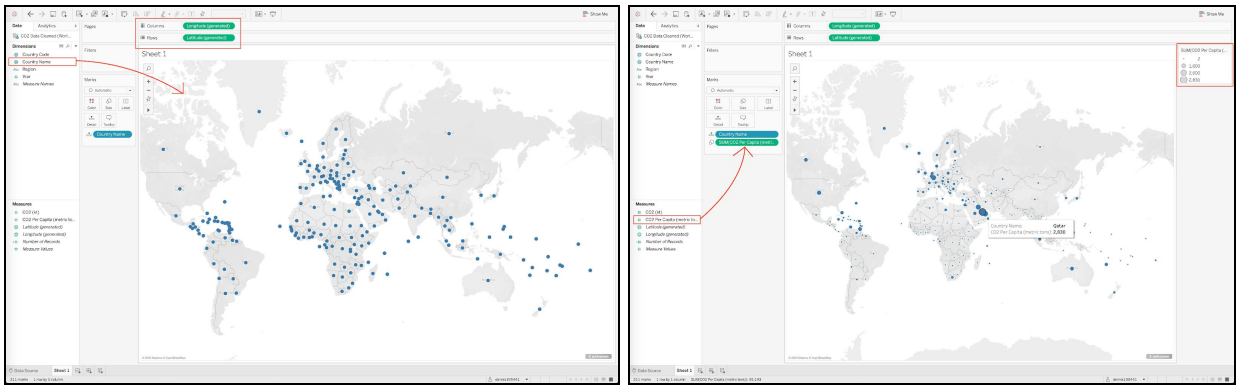


After selecting the spreadsheet, click “Sheet 1 ” at the bottom left corner. Data panel is shown on the left. Tableau divides the data into two main types: dimensions and measures. Dimensions are usually those fields that cannot be aggregated; measures, as its name suggests, are those fields that can be measured, aggregated, or used for mathematical operations.

Data Visualization

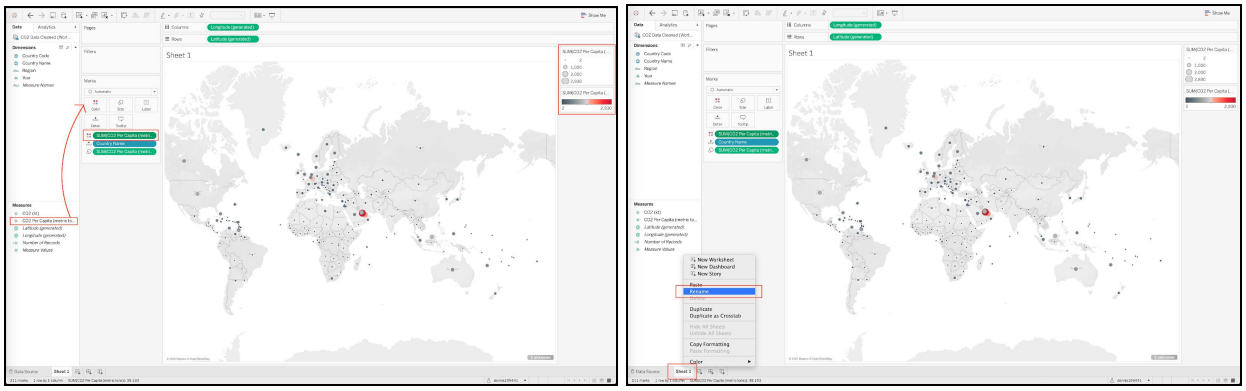
In this tutorial, we will visualize two types of data: location and time series data.

Location data



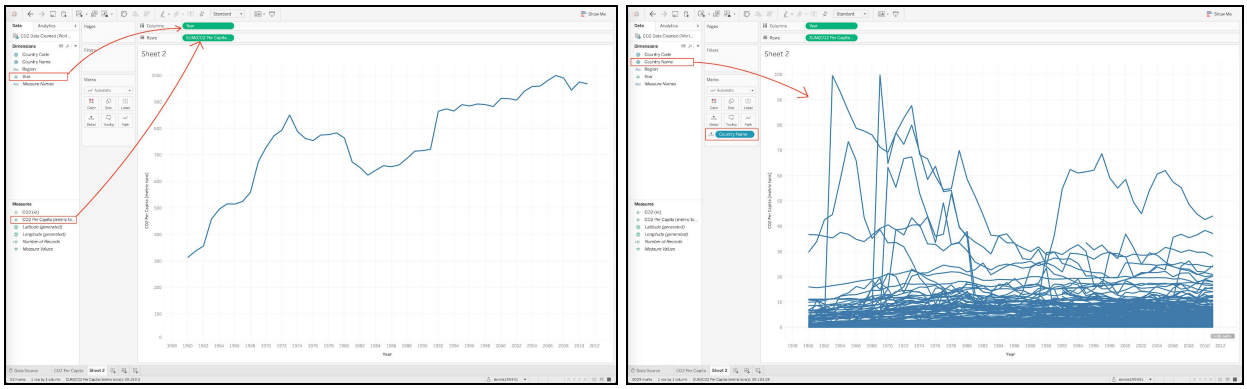
If there is location data such as country name, you can drag it to the main canvas. A world map is shown and the locations are plotted on the map automatically (left). Tableau can recognize most of the location precisely. In case the location is not recognized, you can click Map > Edit Locations in the menu bar to update the unrecognized data.

You can also drag the CO2 Per Capita data to the main canvas from the Measures panel. Tableau automatically calculates the aggregated result for each country. The default aggregate function is SUM. You can change the aggregate function in the Marks panel by clicking the dropdown list in green. The dot size on the map changes according to the aggregated results (right).



You can also modify the color of the dots on the map by dragging CO2 Per Capita to Color on the Marks panel and then edit the color by clicking the Color button (left).
Similar to Microsoft Excel, you can rename the worksheet on the bottom left corner (right).

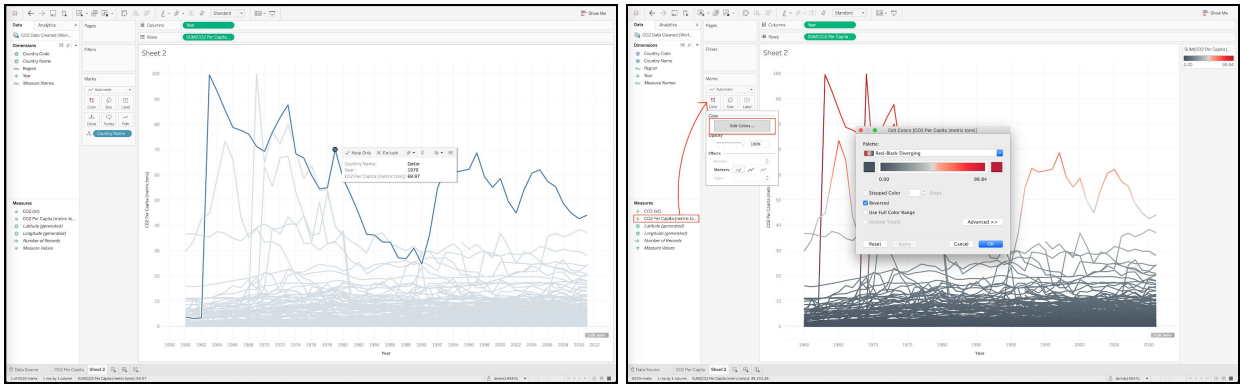
Time series data



Similar to Microsoft Excel, you can create a new worksheet by clicking the New Worksheet button on the bottom left corner.

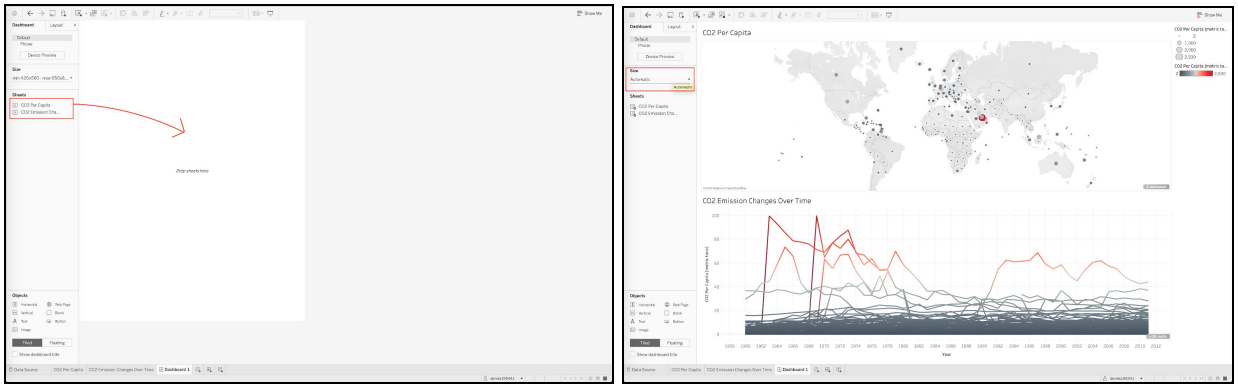
To visualize the time series data, you can drag Year from Dimensions panel to columns (x-axis) and CO2 Per Capita from Measures panel to Rows (y-axis). A line graph is shown on the main canvas where x-axis is Year and y-axis is the sum of CO2 Per Capita in that year (left).

Then, you can drag the Country Name from the Dimensions panel, multiple line graphs are shown on the main canvas. Each line graph represents the CO2 Per Capita of that country in that year (right).

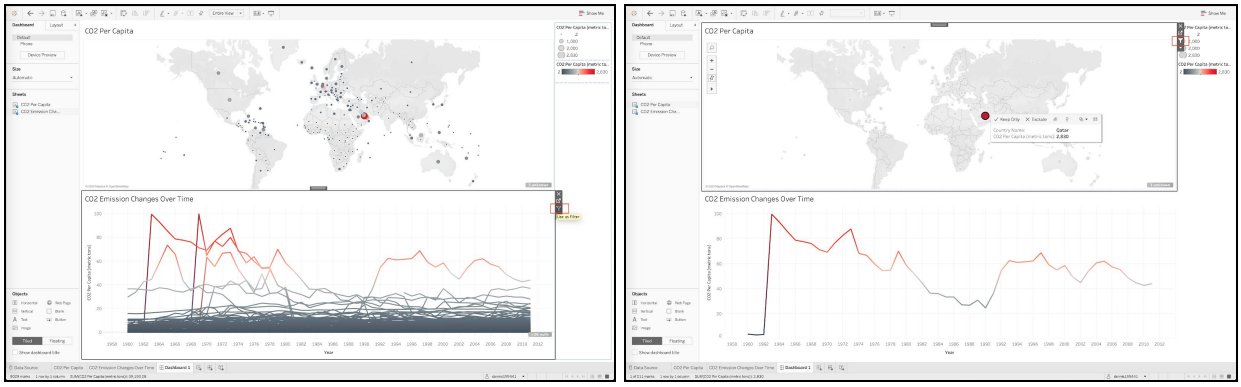


You can click any line on the main canvas, more details are shown on the graph (left). Similar to the map we made before, we can edit the color by dragging CO2 Per Capita to Color on Marks panel (right).

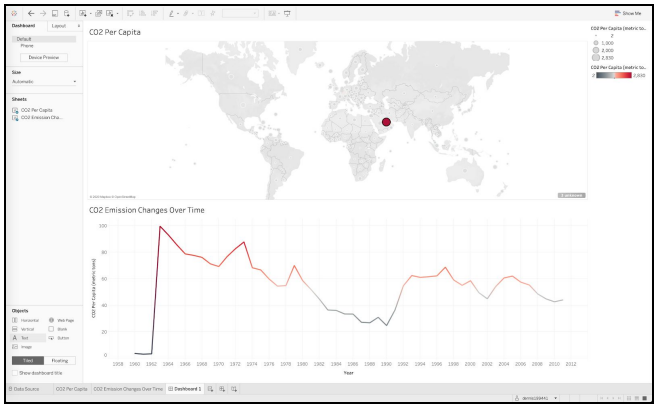
Dashboard



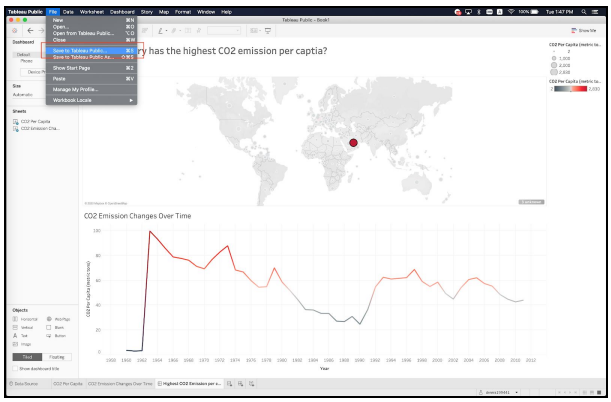
A dashboard is sort of a summary of your data. To create a dashboard in Tableau, click the New Dashboard button on the bottom left corner. The Dashboard panel on the left shows the size of the dashboard and all the available worksheets. You can drag the worksheets from the Dashboard panel to the main canvas and place the graphs nicely. The result should look like the figure on the right.

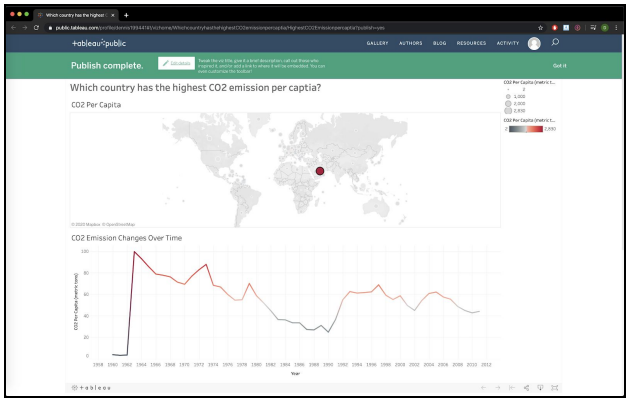


To make the dashboard more interactive, you can click the “Use as Filter” button on the top right corner of each graph. After that, by clicking a dot on the map, the line graph will update correspondingly. The following figure shows how the dashboard looks like.



Save and publish





To save and publish the dashboard, click File > Save to Tableau Public. Tableau Public requires you to sign in to your Tableau Public account. After saving the dashboard, a browser will pop up automatically showing that your dashboard has been uploaded.

Useful Link

https://public.tableau.com/en-us/s/resources