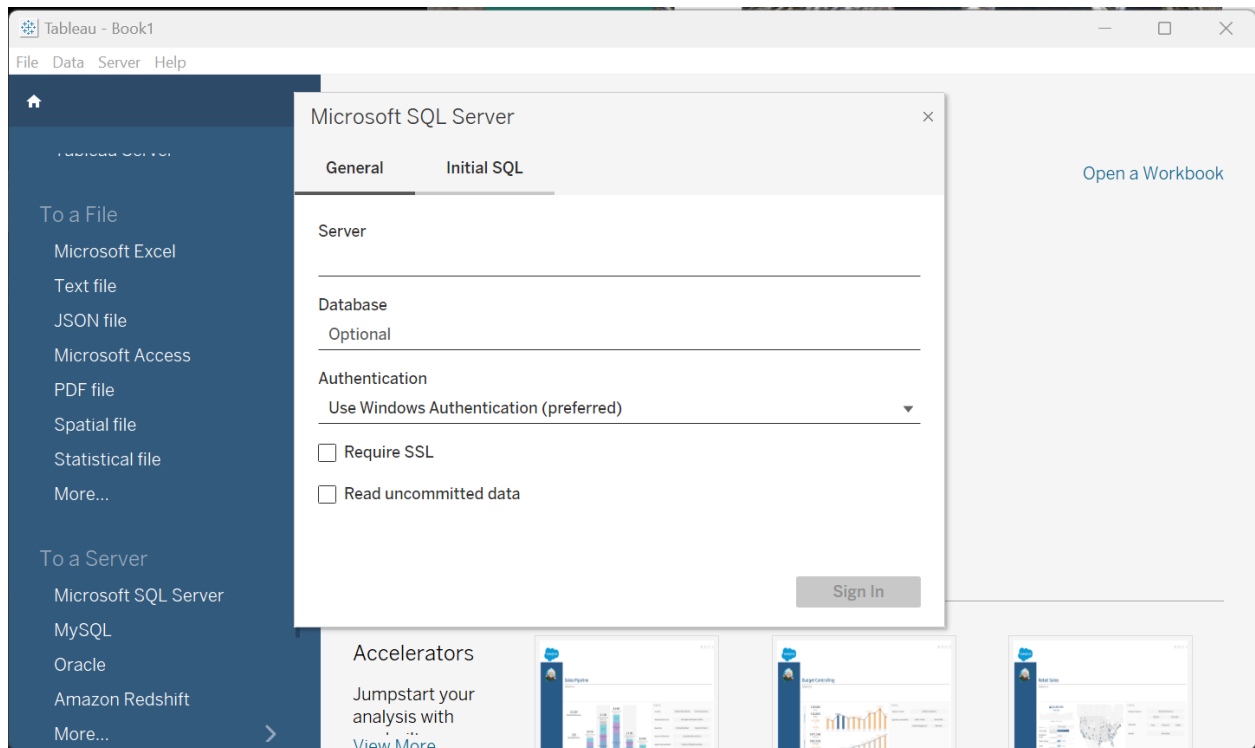


KGuite  
BIDD320  
04/15/2024  
Module 02  
Introduction to Tableau

Introduction to Tableau

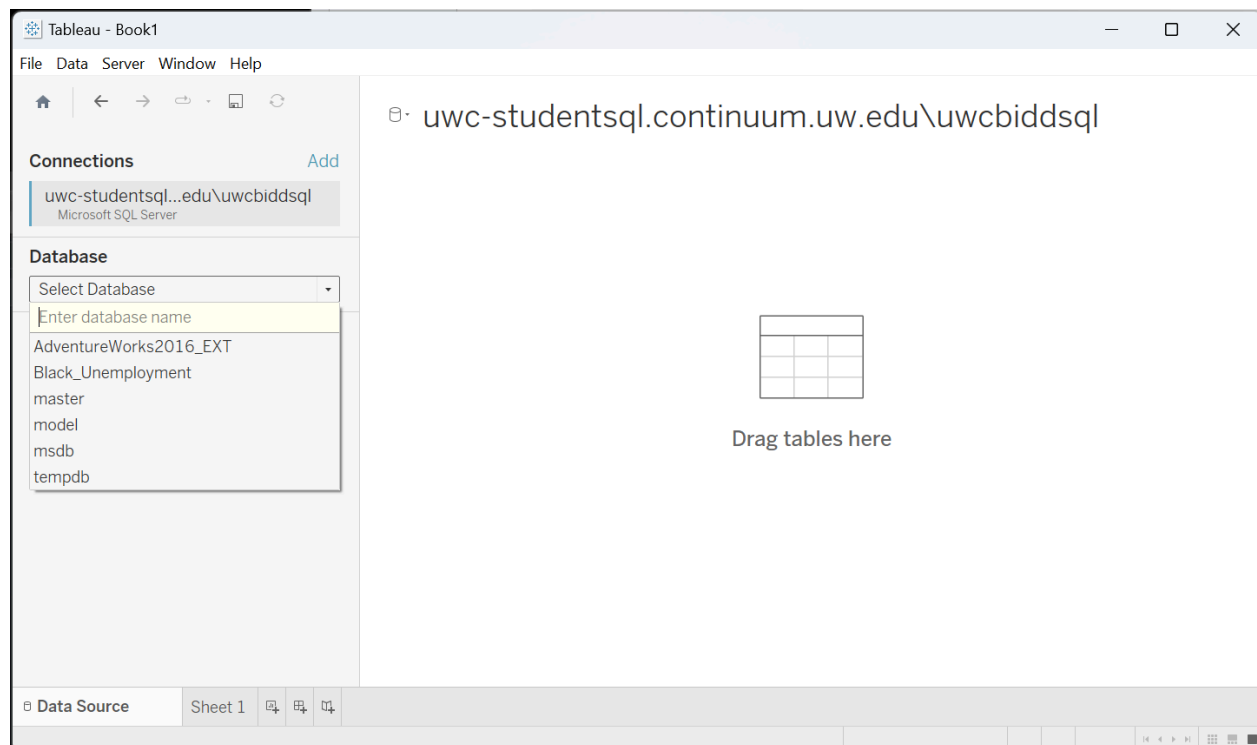
### Step 1: Connect to the server



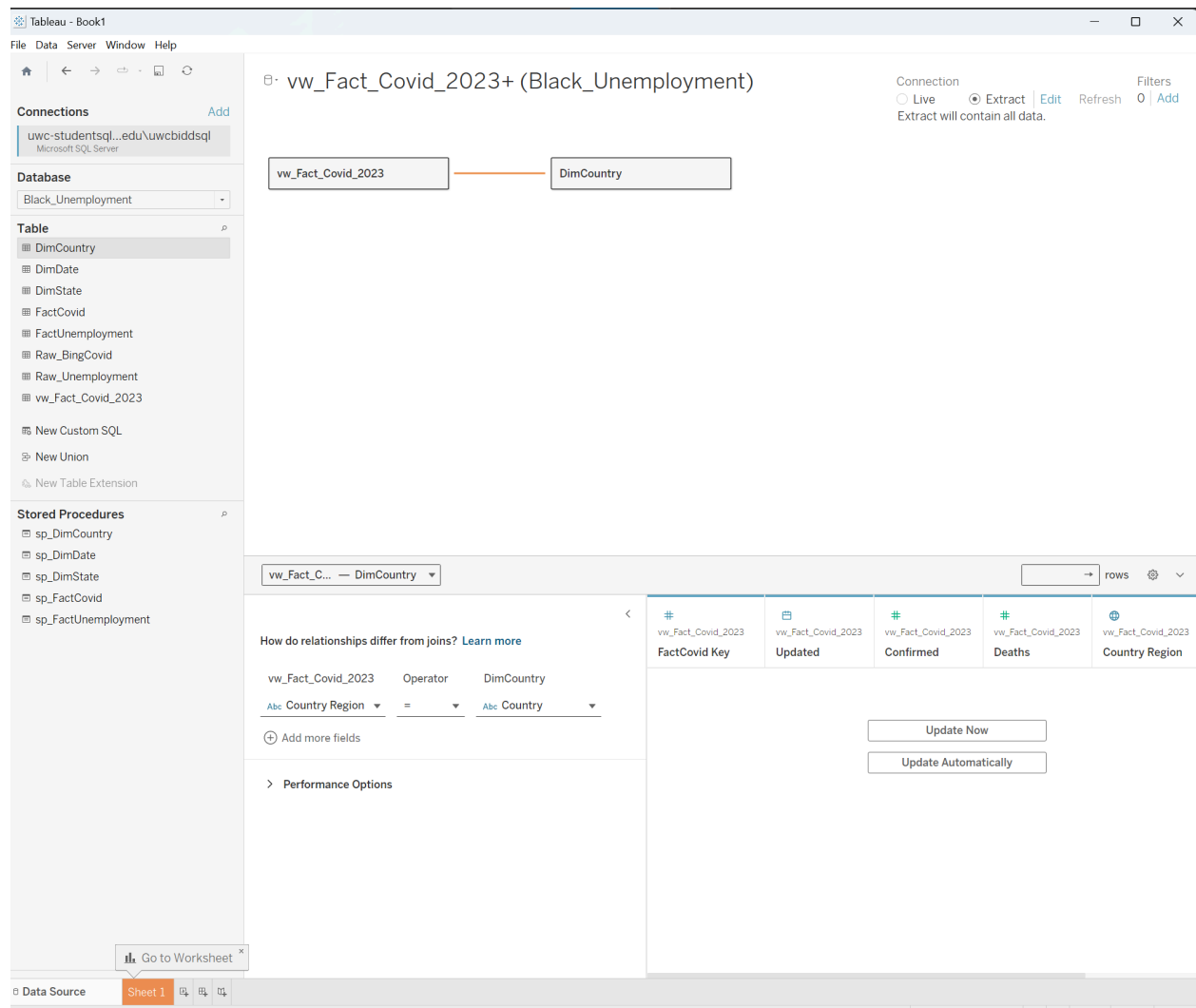
To connect to UW's linked server, we:

- Connect with F5
- Connect SQL Server
- Open Tableau
- Click on Connect To a Server / Microsoft SQL Server
- Server name is the same we used above
- Authentication is our UW username/password, NOT Windows Authentication.

When connected it, should look like:



Next, drag the tables you want to connect to the screen. Start with the main one, here we're using the view:



The view's column "Country Region" matches the column "Country" in DimCountry. So we add the relationship there.

**Important!** Choose "Extract" in the top right corner, not "Live".

**Why?**

**Extracts** are snapshots of the data optimized for quick querying, stored in a highly compressed format. This can drastically reduce the load times for visualizations, especially with large datasets or over slow network connections.

**Extracts** allow users to interact with their data even when they are not connected to the data source. This is useful for situations where you might be working remotely or in environments with unstable network connections.

**Live connections** constantly query the database whenever a user interacts with the visualization. Using an extract can reduce the frequency of these queries, thus lessening the

load on the data source. This is particularly beneficial during peak business hours when the operational systems are under heavy load.

For large datasets, especially those involving complex joins or calculations, a live connection might struggle to perform efficiently. An extract can handle such complexities more adeptly since the data is pre-processed and stored in an optimized format.

With an **extract**, you can choose to include only relevant subsets of data or pre-aggregate the data. This can further enhance performance by reducing the volume of data being processed during analysis.

When the data model is complete, it should look like:

The screenshot shows the Tableau Desktop interface. On the left, the 'Table' pane lists the data sources: DimCountry, DimDate, DimState, FactCovid, FactUnemployment, Raw\_BingCovid, Raw\_Unemployment, and vw\_Fact\_Covid\_2023. The 'Database' pane shows 'Black\_Unemployment'. The 'Connections' pane shows 'uwc-studentsql...edu\uwcbbiddsqli Microsoft SQL Server'. The 'Stored Procedures' pane lists several procedures including sp\_DimCountry, sp\_DimDate, sp\_DimState, sp\_FactCovid, and sp\_FactUnemployment.

The main view displays a data model for 'vw\_Fact\_Covid\_2023+ (Black\_Unemployment)'. The model shows 'vw\_Fact\_Covid\_2023' connected to 'DimCountry', 'DimDate', and 'DimState'. 'DimDate' is further connected to 'FactUnemployment'.

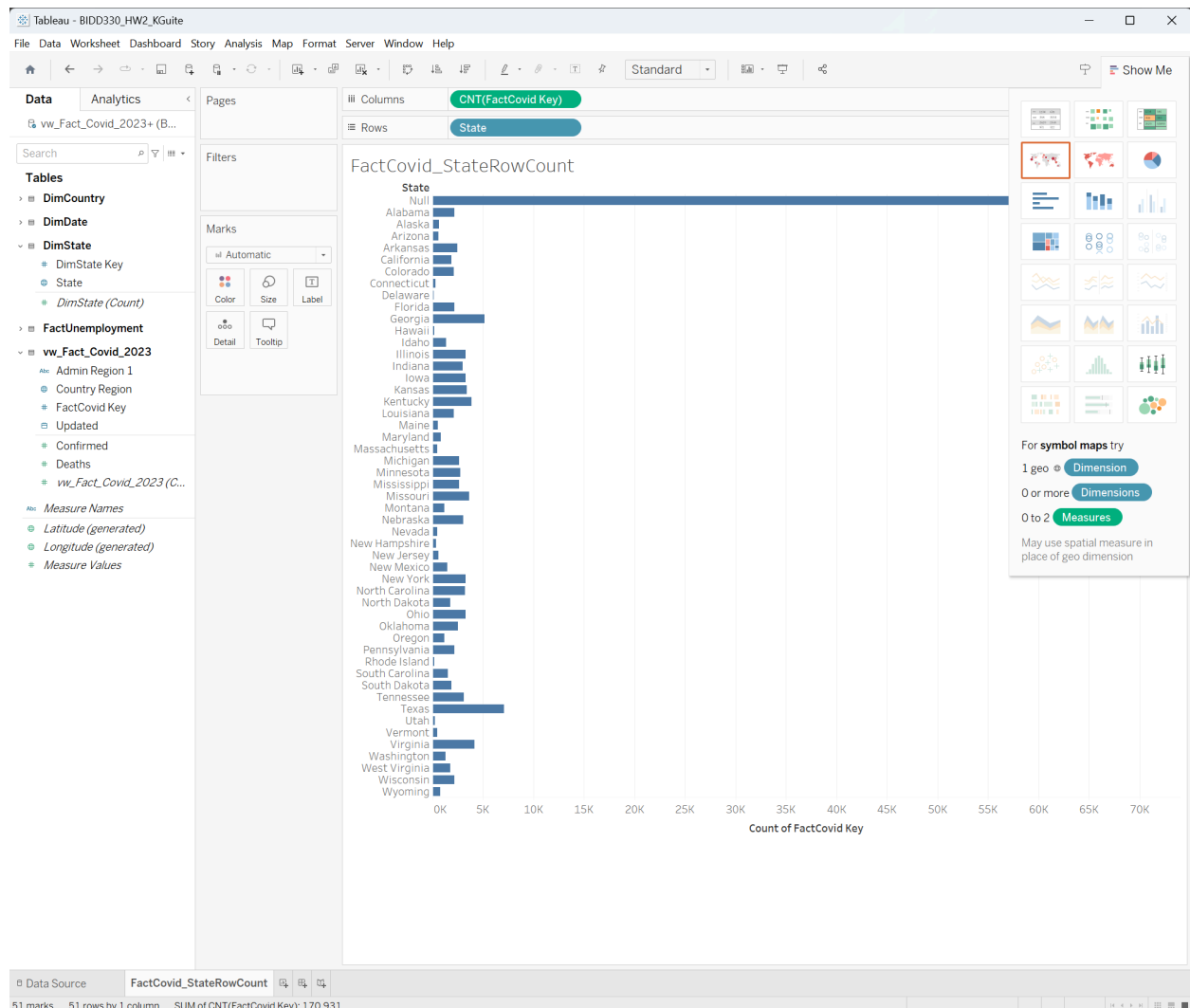
Below the data model, a table is displayed with the following columns: FactUnemployment Key, FactUnemployment State (FactUnemploye..., FactUnemployment Filed week ended, and FactUnemployment Initial Claim. The table contains 11 rows of data for Alabama, with dates ranging from 1/4/2020 to 3/14/2020.

FactUnemployment Key	FactUnemployment State (FactUnemploye...	FactUnemployment Filed week ended	FactUnemployment Initial Claim
1	Alabama	1/4/2020	
2	Alabama	1/11/2020	
3	Alabama	1/18/2020	
4	Alabama	1/25/2020	
5	Alabama	2/1/2020	
6	Alabama	2/8/2020	
7	Alabama	2/15/2020	
8	Alabama	2/22/2020	
9	Alabama	2/29/2020	
10	Alabama	3/7/2020	
11	Alabama	3/14/2020	

**Adding a Measure:**

To add a measure, go to the first Sheet on the bottom.

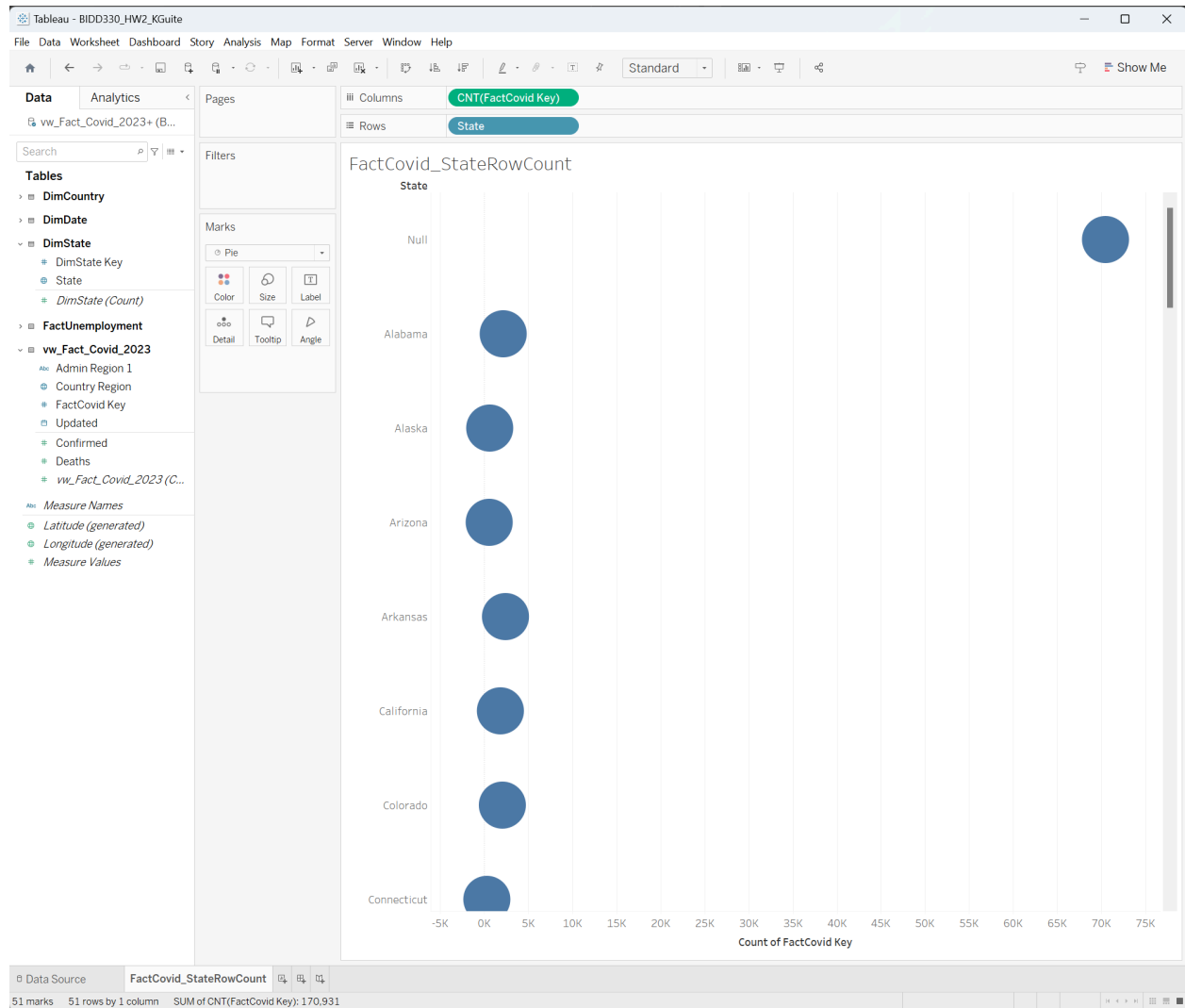
Rename the sheet to the measure. In this case it's FactCovid\_StateRowCount



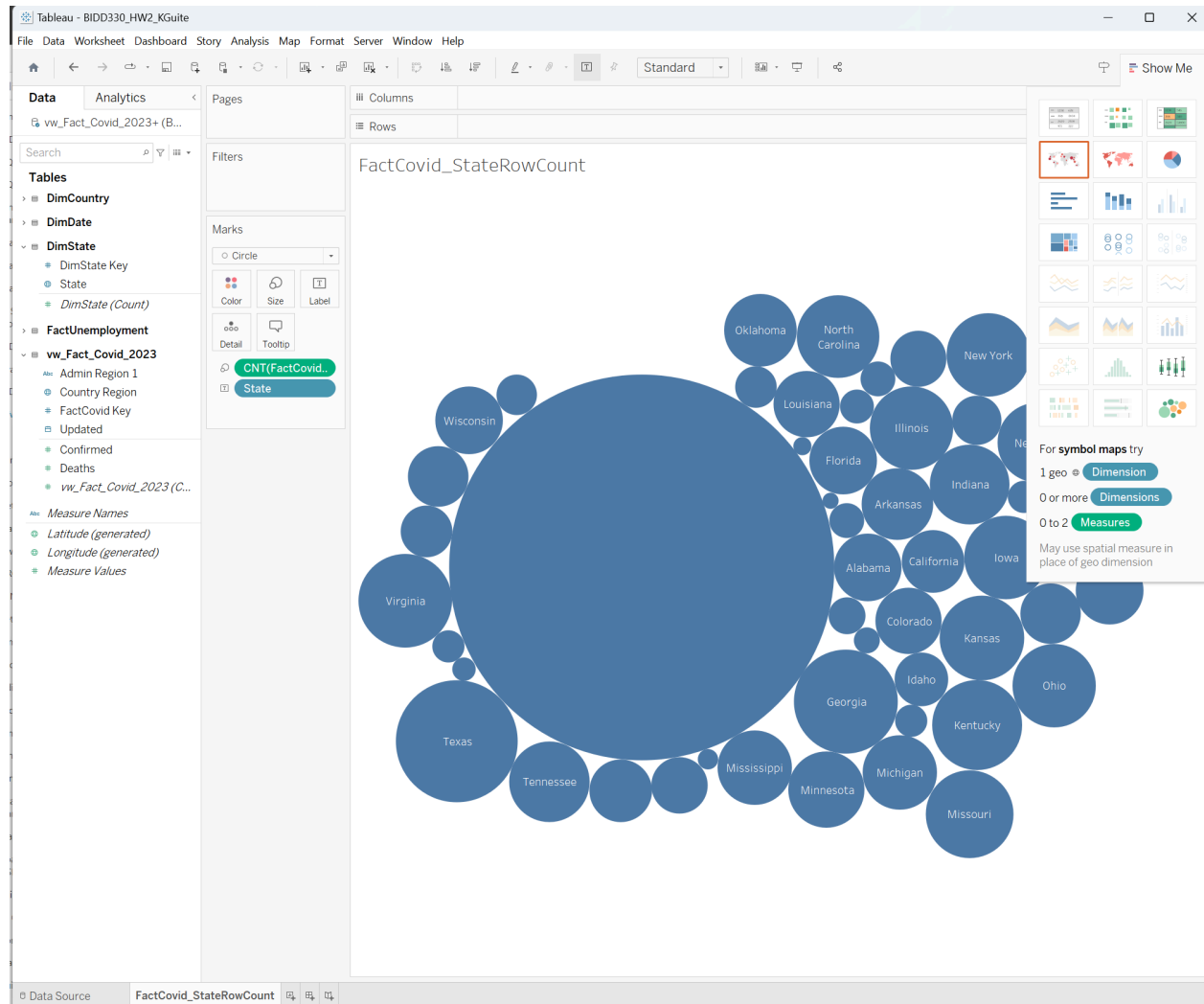
In the Columns bar at the top, drag over your measure (FactCovidKey) then add the function. It should say COUNT([FactCovidKey])

In the Rows bar, drag over State.

The way the bar chart is shown can be changed using the Marks on the left. Above the bars are filled in with a color as usual. Here, the marks is turned to Pie, which makes each bar chart end in a circle.



On the right side of the screen, you can click on “Show Me” to use other types of charts. Here’s a bubble chart:



More measures can be added in more sheets in the same way.

When finished, go to File -> Export Packaged Workbook and export it to your DEPLOY folder.

