

Exercise 5: Global Terrorism Dual Axis Map

Objectives

1. Learn how to use basic Tableau map features to analyze terrorist events in the U.S.
2. Learn how to utilize a dual-axis to create a map with two sets of geographic data overlaid on top of one another.
3. Create a filled map of U.S. states with data points for each city in the dataset layered on top.

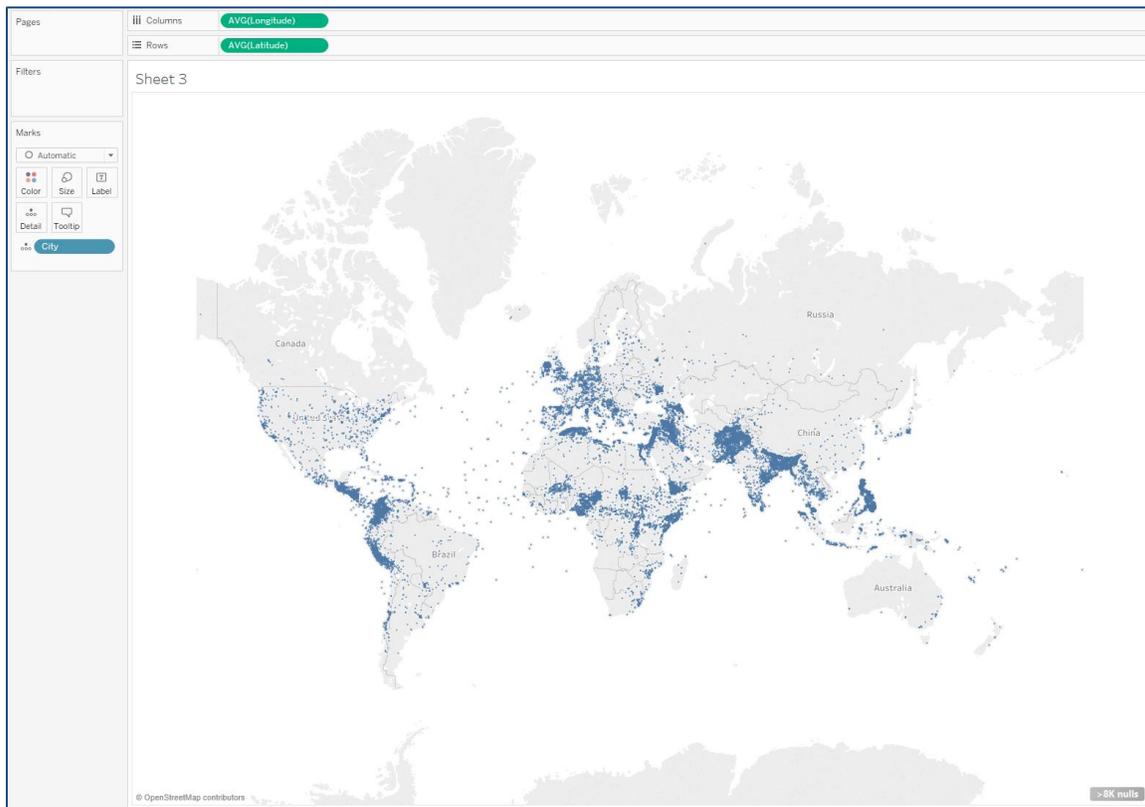
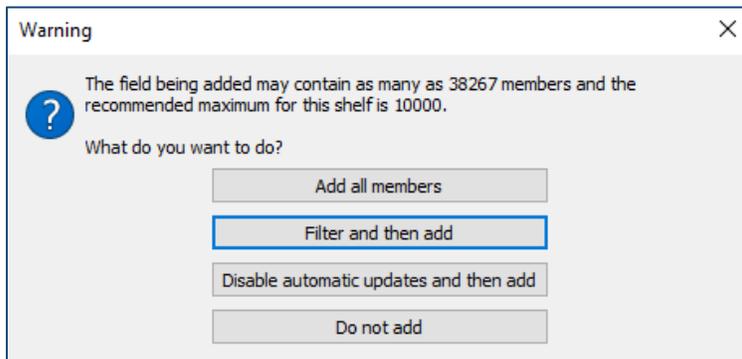
Dual Axis Map

1. Open the Tableau starter workbook called **Exercise 5 GTD Dual Axis Map** in the Exercise Starter Workbooks folder. In the Data Source tab notice that each row in the dataset represents a terrorist event, its location (latitude and longitude), and the event date amongst other distinguishing variables. Let's start by creating a symbol map showing terrorist events that occurred only in the U.S.
2. First, double-click on **Latitude** and **Longitude** in the Measures Pane to generate a map.

Notice that there is a single mark representing the coordinate point at the average latitude and longitude in the dataset. By default, Tableau aggregates the data to the level of detail in the view. Since we have no other dimensions in our sheet, Tableau will aggregate the latitudes and longitudes at the data source level.

3. Since we want to create a symbol mark for each terrorist event location, drag the geographic field **City** onto the Detail Shelf and select 'Add all members' in the Warning box. Doing this will aggregate the event locations by city.

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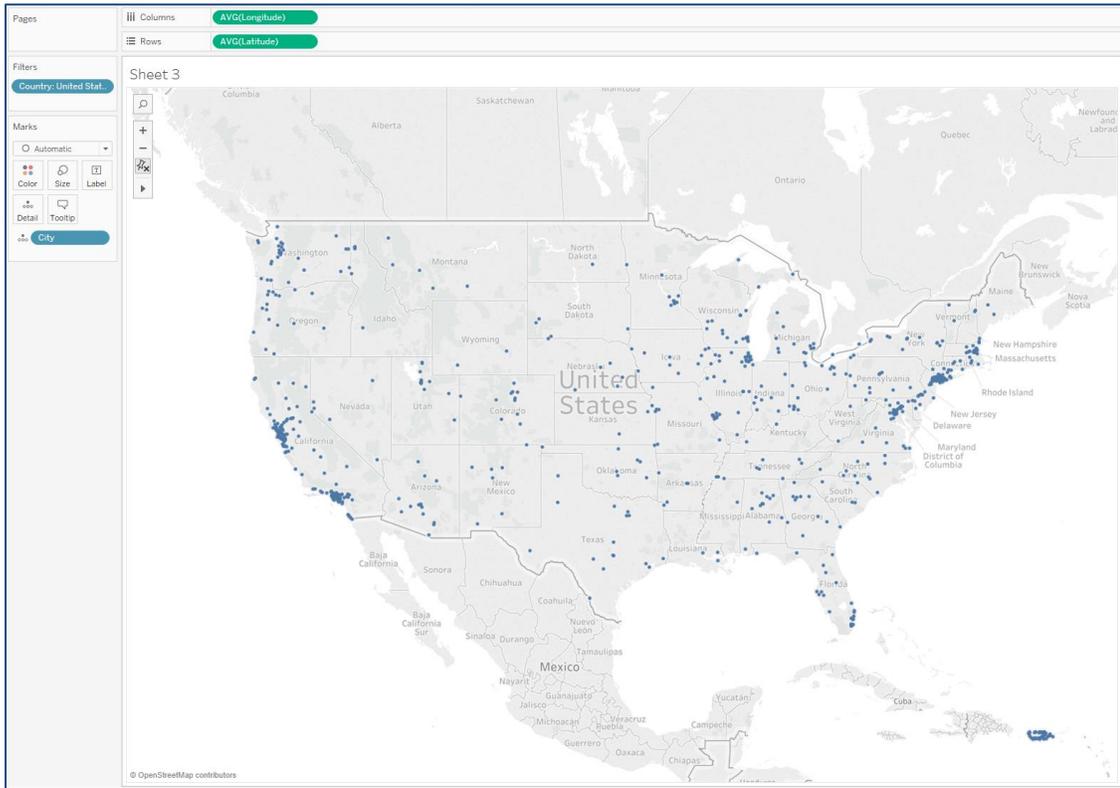


Question 1: How many marks are displayed on this map and what does each mark represent? _____

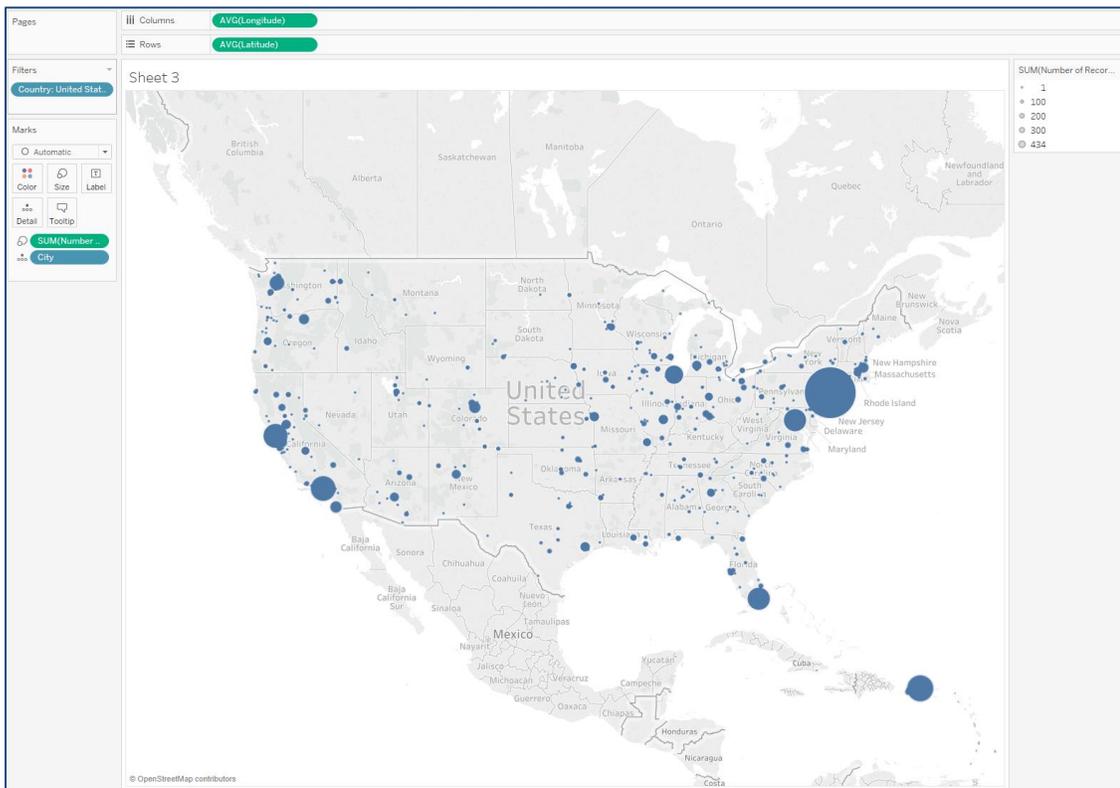
- To apply a filter so that only terrorist events that occurred in the U.S. are mapped, drag the geographic field **Country** onto the Filter Shelf and check only the box next to 'United States'.



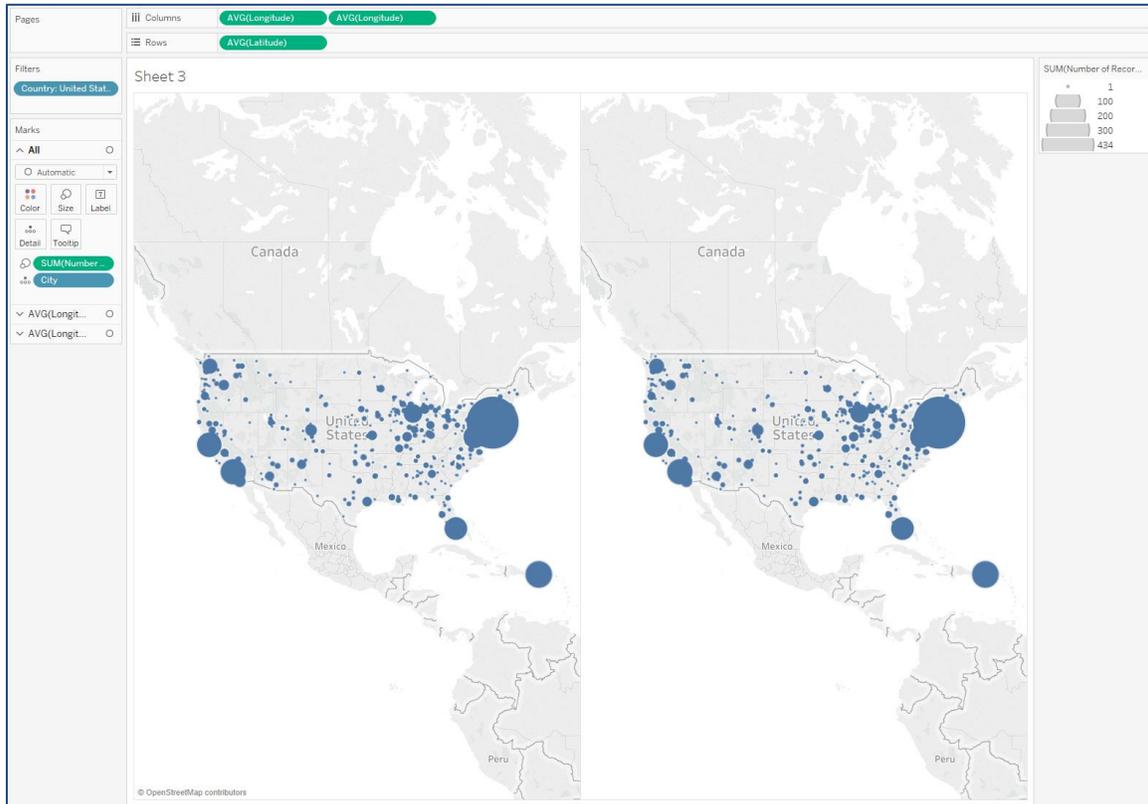
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5. Drag **Number of Records** onto the Size shelf so we can see which cities in the U.S. have the most terrorist attacks.



- Once the symbol map is created, you can create a duplicate of that map by holding the Control key and left-clicking on the **Longitude** field. While holding Control, drag **Longitude** onto the Columns shelf next to itself. You'll now see two maps have been created.

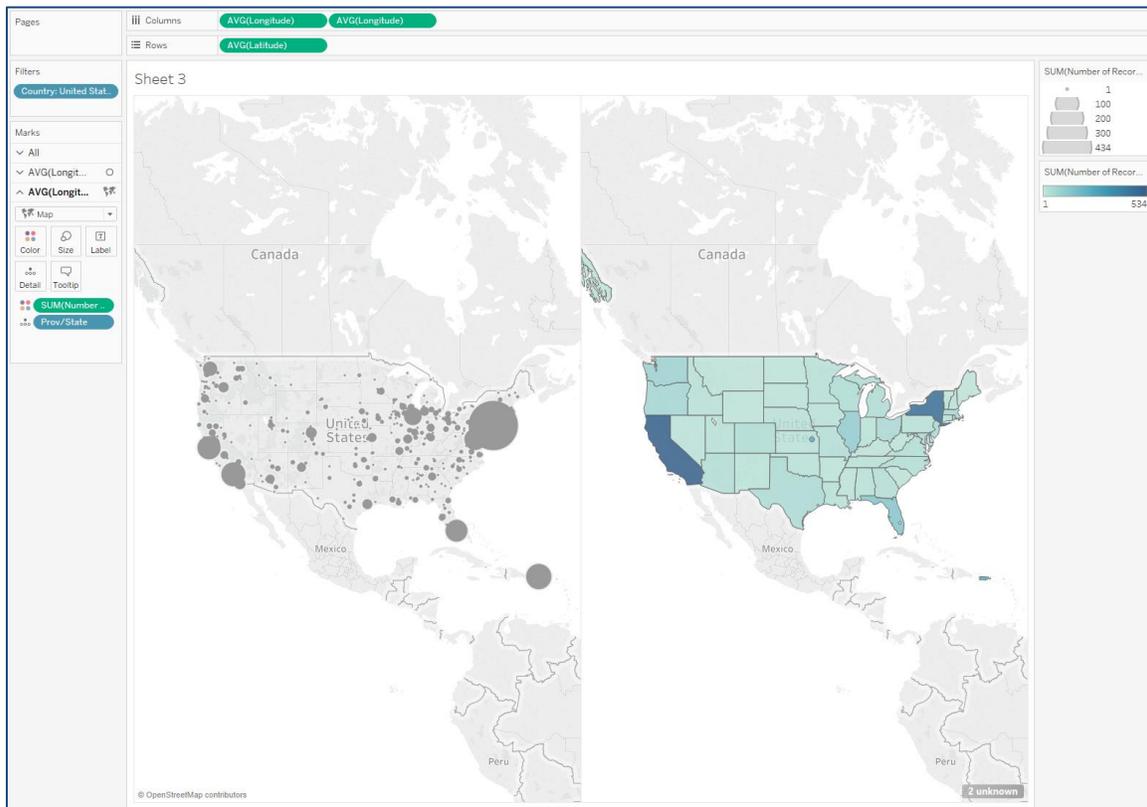


Notice that there are two separate marks shelves, one for each map. You can edit each map independently, leaving the first map as a symbol map and changing the second map to a filled map.

- Remove the fields **City** and **Number of Records** from the marks card of one of the maps and drag **Prov/State** to the Detail shelf. Change the drop-down menu from Automatic to Map.
- You should now see a filled map for one of the maps. We can drag **Number of Records** onto the Color shelf to create a color spectrum representing the total number of terrorist attacks by state.



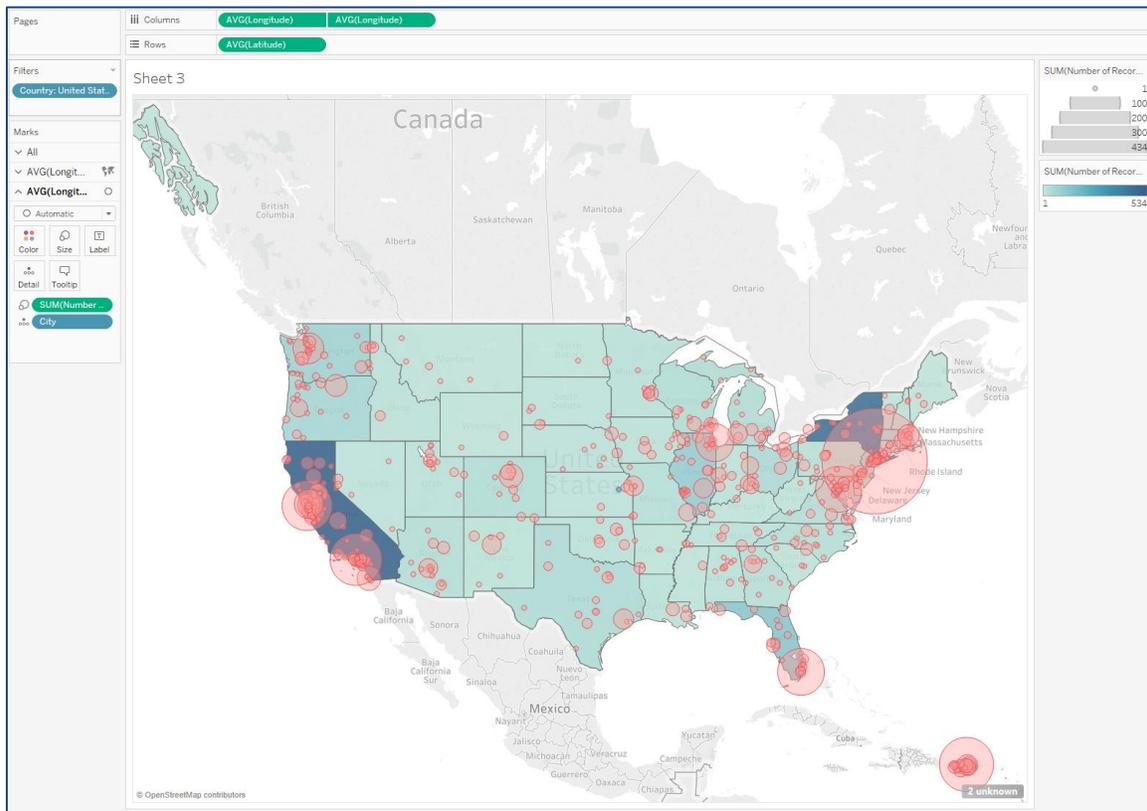
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- Once you have created the two maps, you can combine them into one map using Dual Axis. Click on the carrot on the right-hand side of the second **Longitude** pill on the Columns shelf and select 'Dual Axis'. Now, both maps are represented on a single map.



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Using the dual axis map, edit the fields on the marks cards to answer the following questions.

Question 2: Which two states have had the greatest number of terrorist events in total and how many? _____

Question 3: Which city had the most terrorist attacks in 1995 and how many? _____

Question 4: Which city had the most fatalities in the state that had the greatest number of terrorist attacks in 1995? How many fatalities? _____

