

Tableau Public tutorial

Before you start:

Download Tableau Public from: <http://www.tableausoftware.com/public/download-steps>

Create a Tableau Public account at: <https://public.tableausoftware.com/auth/signup>

Download the dataset from: http://www.peteraldous.com/Data/USDA_activity_dataset.xls

The Data:

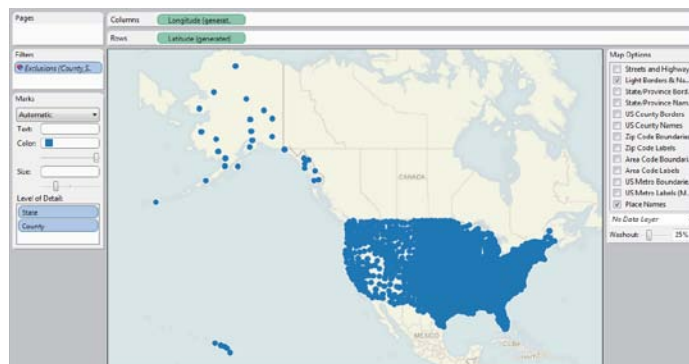
- Open **USDA_activity_dataset.xls** and examine the contents.
- The data details physical activity, obesity, and other health data in nearly 100 columns, for more than 3000 rows, one for each county in the US.

Connect to the data:

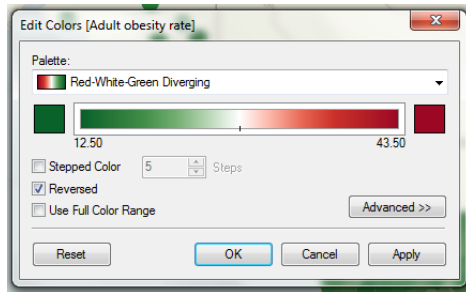
- Drag and drop **USDA_activity_dataset.xls** on top of the Tableau Public icon on your desktop to open.
- At the dialog box, click OK to connect.
- Tableau automatically recognizes categorical fields, like **“State,”** and numerical measures like **“Adult obesity rate.”**

Create the first view (a map for each state showing obesity rates at the county level):

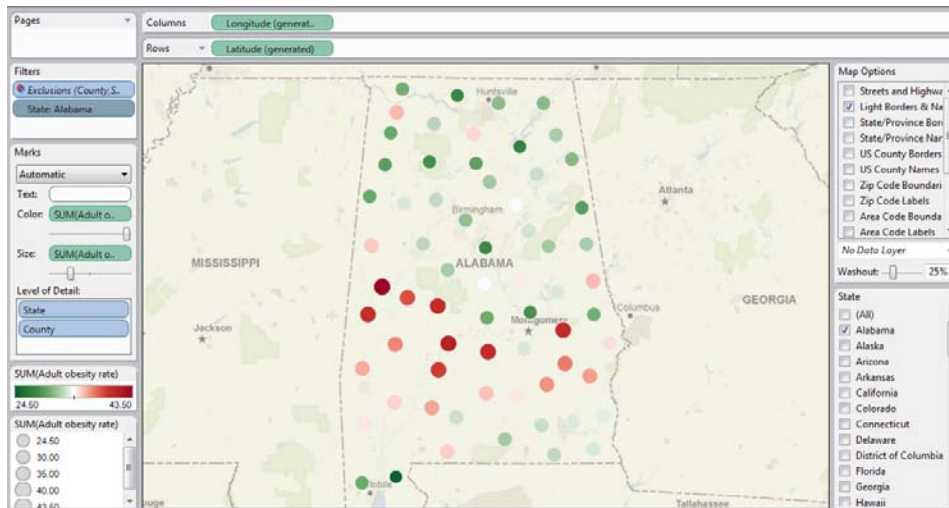
- Double click on **“State”** and **“County.”** Tableau Public recognizes they are geographical fields and geocodes them accordingly.
- You may get a warning message; if so, check so that you don't see it again.
- Notice there is a point at 0 degrees latitude and longitude. These are null values. Select them by clicking to one side of the point, keep the mouse button depressed to draw a rectangle over it, then release. Right click on the selected null values and select **Exclude**.
- Right click on the **Exclusions** in **Filter** and select **Make Global**, so that this will apply to all subsequent views.
- Now you have a map showing a dot for every county where you have a record:



- Drag **“Adult obesity rate”** from the **Measures** panel into **Color**, and copy it into **Size** shelf to encode counties by those values.
- Change the **Color** to **Red-White-Green Diverging**, and reverse it:

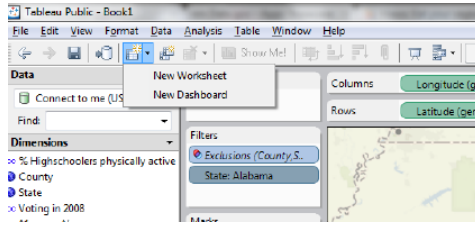


- Now add a filter to enable the selection of individual states. Click and drag **“State”** into the **Filters** shelf, click OK at the dialog box.
- Right click on **“State”** in the **Filters** shelf and select **Show Quick Filter**. Deselect **All** and then select **Alabama**.
- Rename the worksheet **“Map View”** by right clicking on the tab at the bottom.
- Finished state of first view:

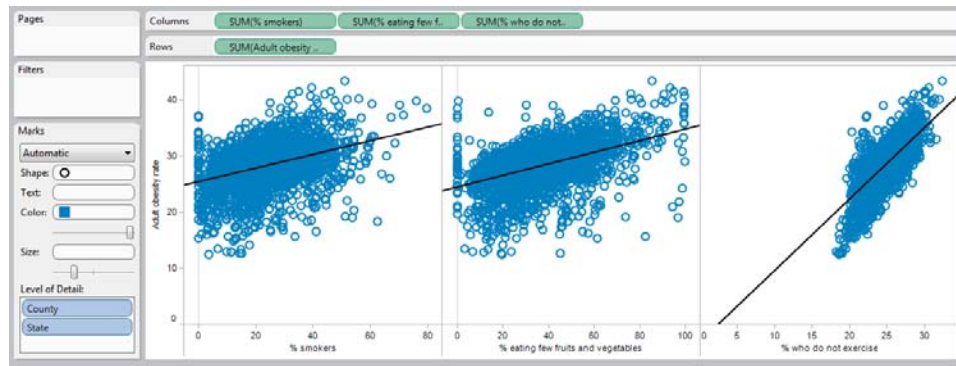


Add a second view (scatter plots showing the relationship between obesity and health-related behaviors at the county level):

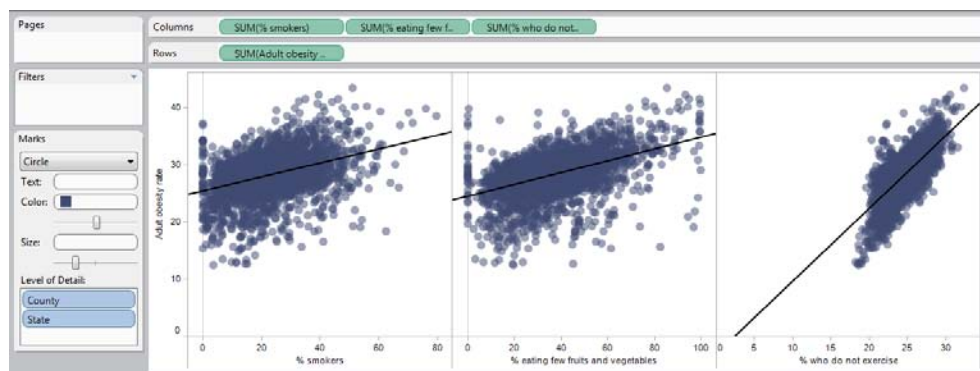
- Add new worksheet:



- Drag **“Adult obesity rate”** onto **Rows** and **“% smokers,” “% eating few fruits and vegetables”** and **“% who do not exercise”** into **Columns**.
- Drag **“County”** and **“State”** into **Level of Detail**. Without this step, Tableau’s default behavior is to sum the values across all the counties and states, which will give you a single data point for each graph, and not the desired scatter plots.
- The view should now look like this:

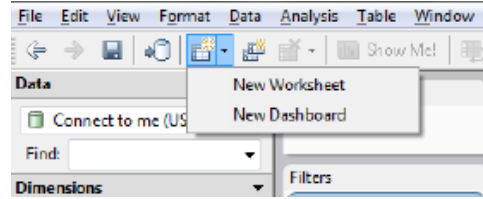


- Change **Color** to purple, open the Drop down menu next to **“Automatic”** and select **Circle**, then move the slider below to the left to increase transparency of the points.
- Select **Analysis** in the top menu and check **Trend Lines**.
- Rename the worksheet **“Scatterplot View”** by right clicking on the tab at the bottom.
- Finished state of second view:

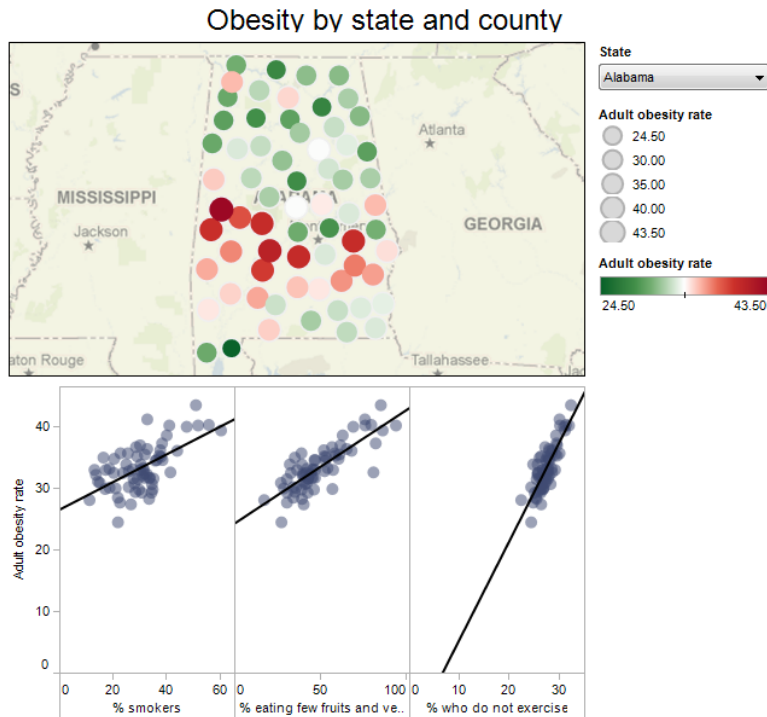


Create a Dashboard with both views:

- Add dashboard:



- Double click on each view to bring both out onto the dashboard. Right click on the **State** filter, select **Compact list**.
- Right click on this filter again, and select **Make Global**. This will ensure that selecting a state alters both views simultaneously.
- Right click on this filter for a third time, select **Customize** and uncheck **Show "All" Value**. This prevents users from seeing the entire data for all the US.
- Right click on the titles of each view and select **Hide Title**.
- Rename the dashboard "**Obesity by state and county**" by right clicking on the tab at the bottom.
- Double click on **Title** under **Objects**
- The dashboard should now look like this:



Save to the web:

- Under **Size**, click **Edit** and select the size and layout best for your website.
- Click **File** on the top menu and select **Save to Web**. You will be asked for your account login at this point.

Embed on your website/blog:

- In the **Save To Web Results** window that has opened up, scroll down beneath the visualization and click on **Share**.
- Copy and paste the embed code into the html of your web page.
- You should now have this online visualization:
http://www.peteraldhous.com/tableau_demo.html
- You can also download a PDF of this handout from:
http://www.peteraldhous.com/CAR/tableau_demo.pdf