Google Fusion Tables - Basics

What Fusion Tables is and does

Google Fusion Tables is a free web service provided by Google for data management. Data is stored in the form of tables that web users can view and download. Fusion Tables is a popular tool to store, visualize and share larger data tables.

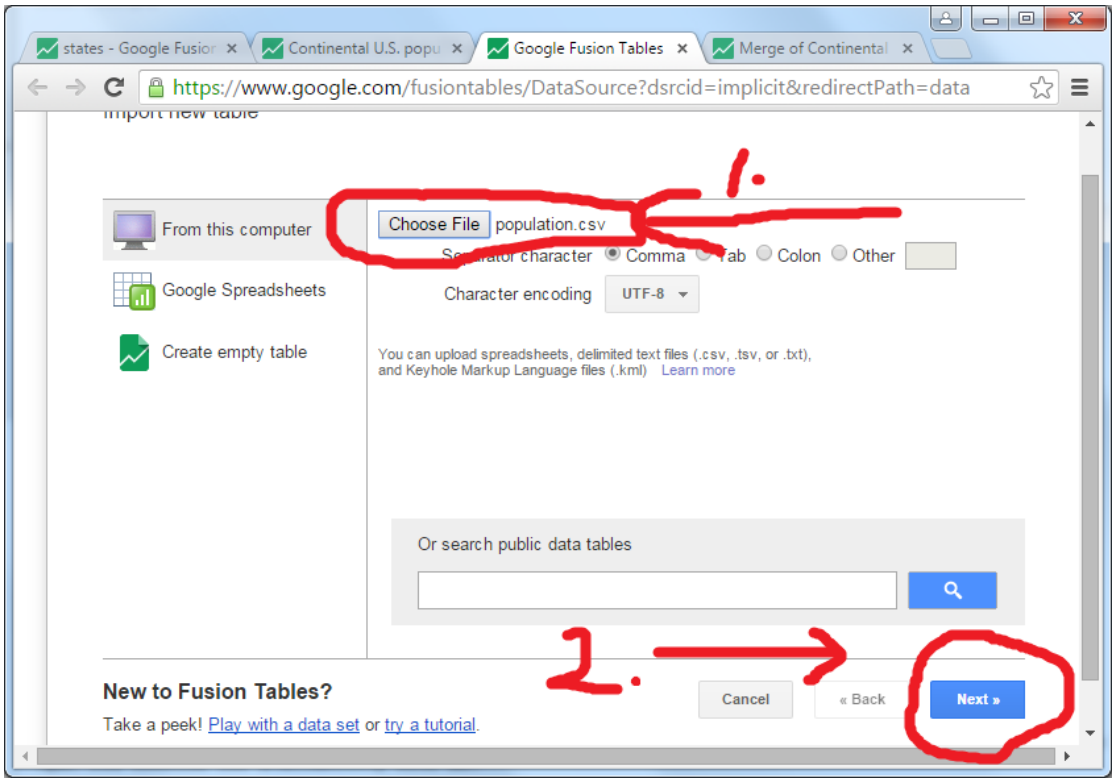
Download the data:

Please download the two data sets for exercise:

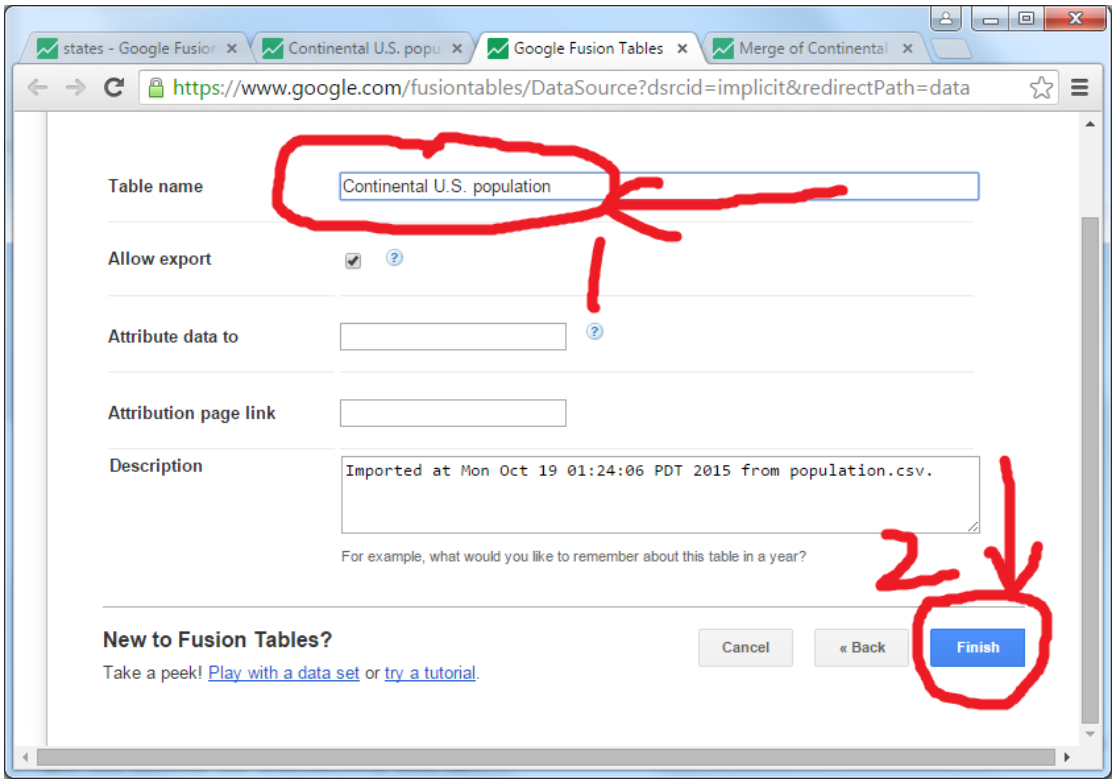
1) The U.S. population table:
   http://www.mulinblog.com/misc/population.csv
2) The U.S. state boundary geometry table:
   http://www.mulinblog.com/misc/states.kml

Upload Data to Fusion Tables

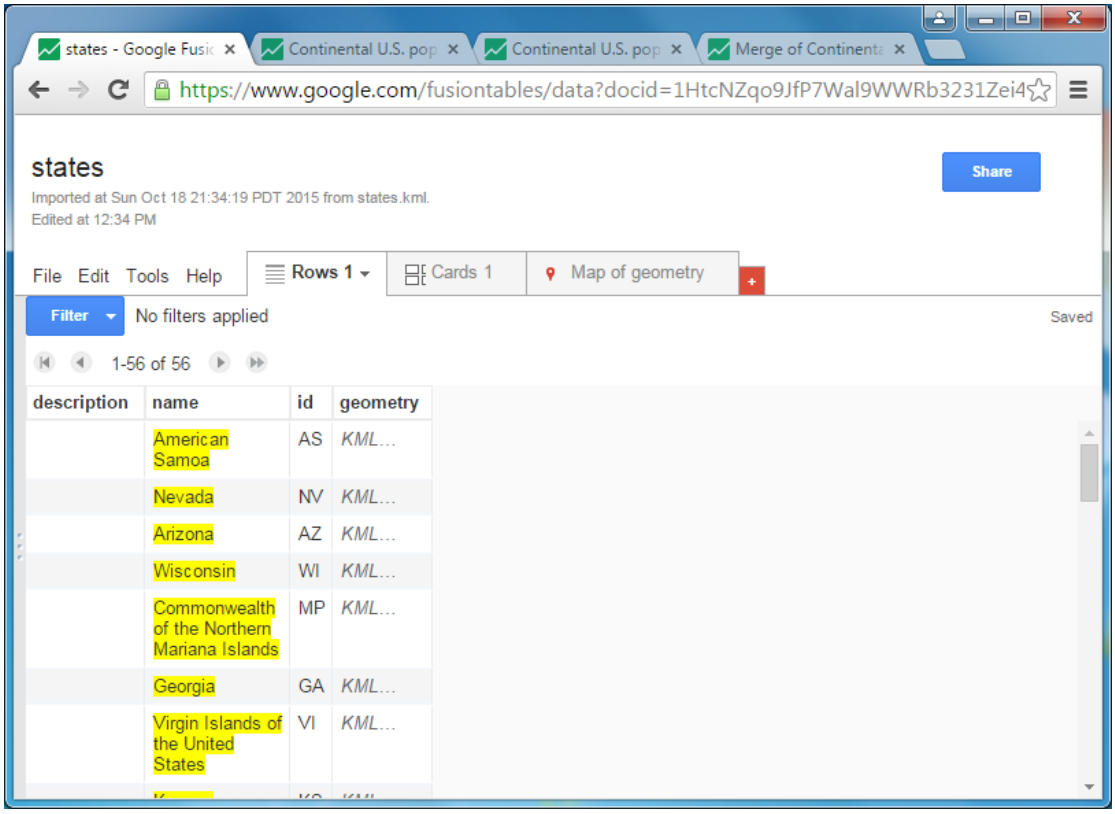
1. Click **"Choose File"**;
2. Browse to find the population.csv file;
3. Click **Next>>**;
4. Click **Next>>** again;



5. Update the Table name to **Continental U.S. population**;
6. Click **Finish**;



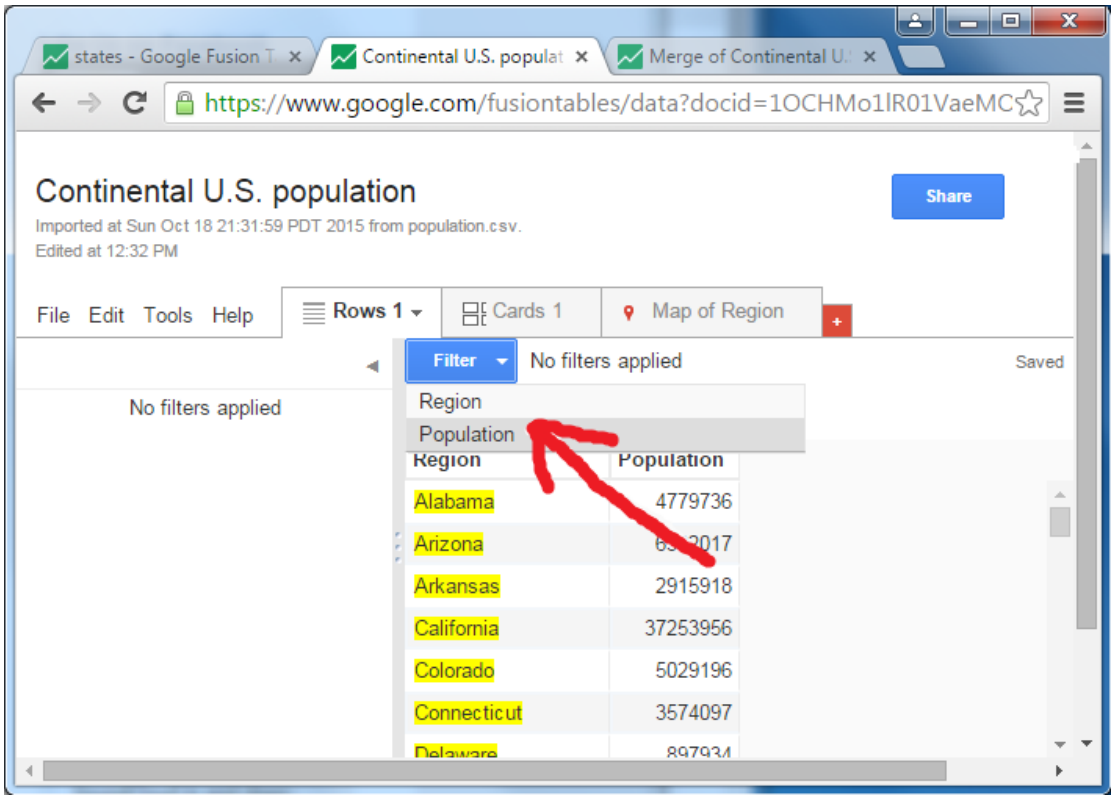
7. You can see the example of what the table will look like in Fusion Tables.



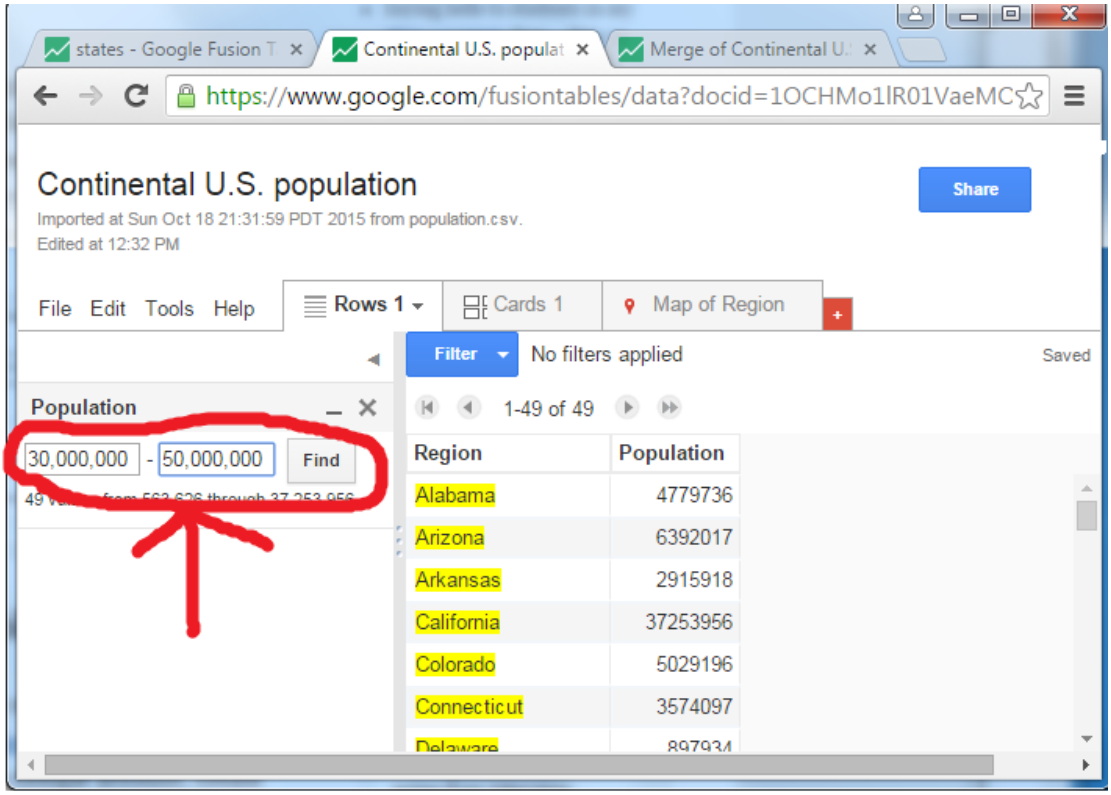
How to use filter

When working with a large data set, you may have the need to isolate and work with a subset of the data, you then need to use the built-in filter function to get what you need. As the population.csv file lists the name of the state and the population, let's say, among these states, we would like to know and deal with the data that settles down to the range of 30,000,000 to 50,000,000.

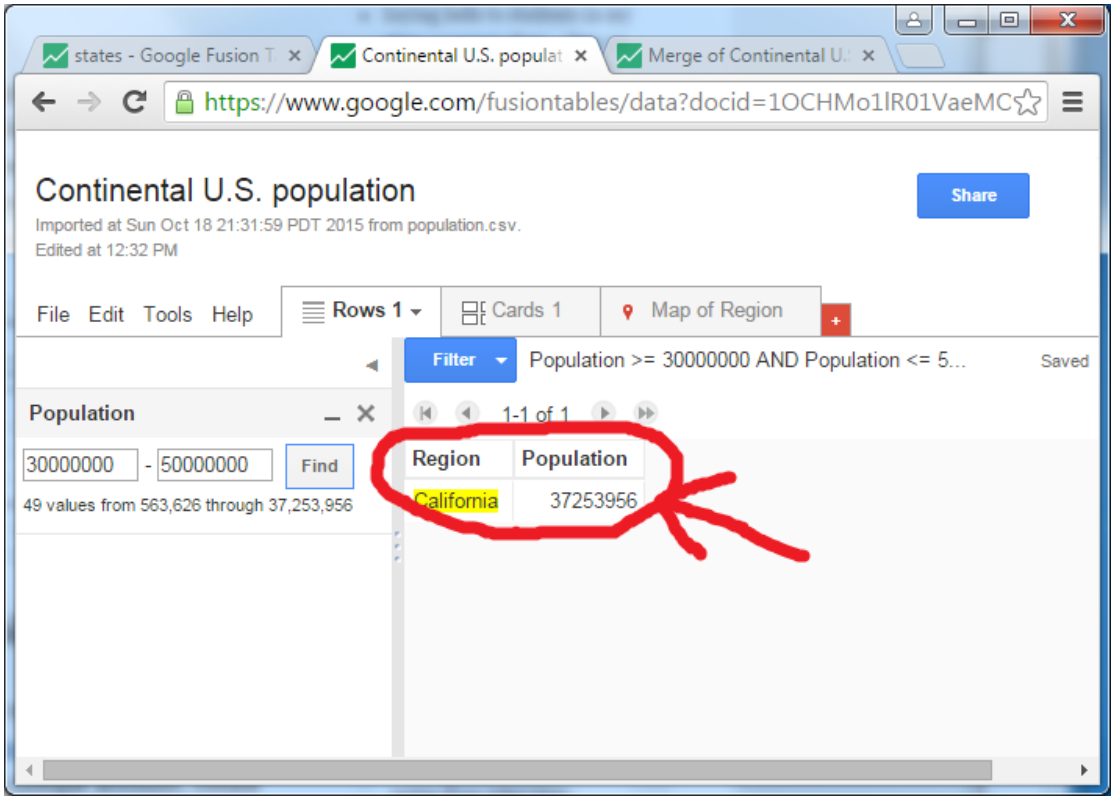
Step 1: Click the blue **filter** tab; you will see a list of column names in this table, then click **population**;



Step 2: Type **30,000,000** and **50,000,000** in the search box; click **find**;



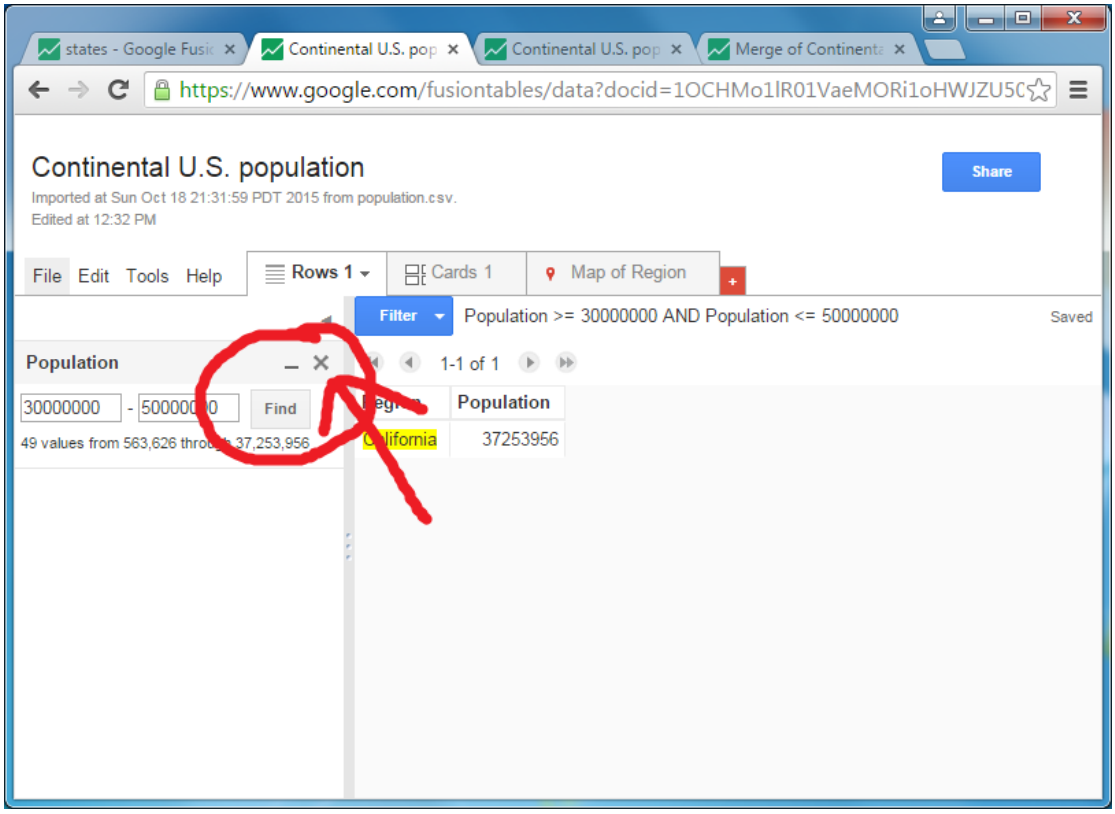
Step 3: You will see only one row with **Region** name **"California"** occurs.



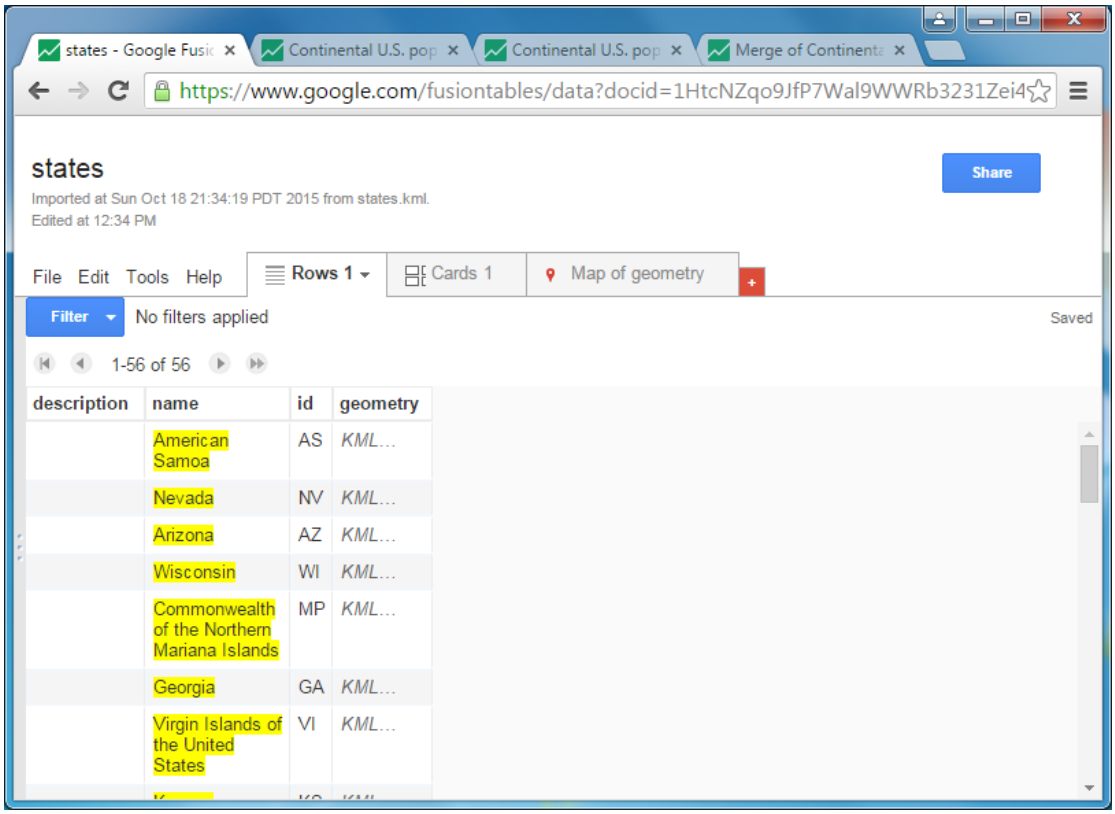
Create heat map:

1. Upload the 2nd table

***Step 1*: Close** the filter window on the left side of the webpage, you will notice that this table has 49 rows, each corresponding to one contiguous continental state; also notice that the state names in the "Region" column are in yellow-this means Fusion Tables recognizes them as location and is trying to geocode them, which in other words means matching the tests with real locations. For our purpose, we are using a separate state boundary file we don't have to wait for and rely on Fusion Tables to finish this geocoding process.

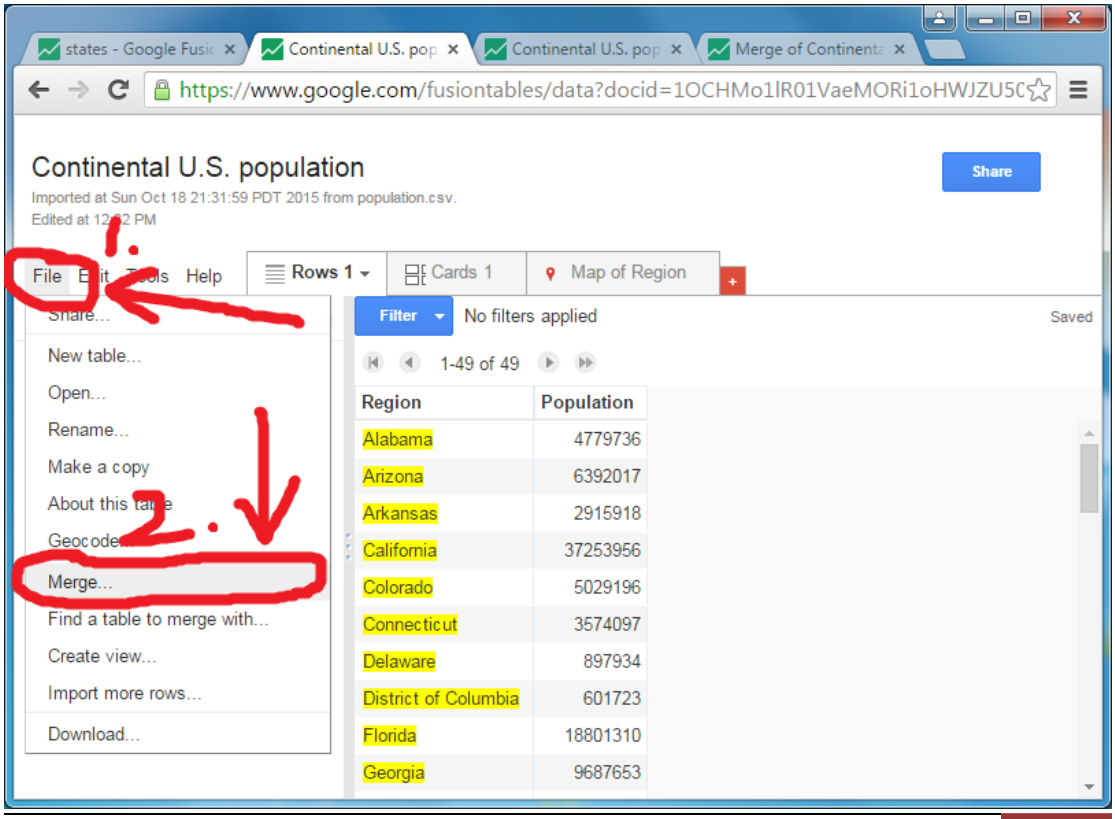


Step 2: Upload the second table, state.kml, which is the one that contains geographic information of state boundaries. IMPORTANT: to import the second table, you need to open a new browser window or tab and repeat the process above. The uploaded table looks like the screen shot below and has 56 rows each corresponding to a U.S. state or territory. Notice that it has four columns: description, name, id, geometry. The geometry column contains geographic information for each state, and Fusion Tables uses this geometry information to plot the states on the map.

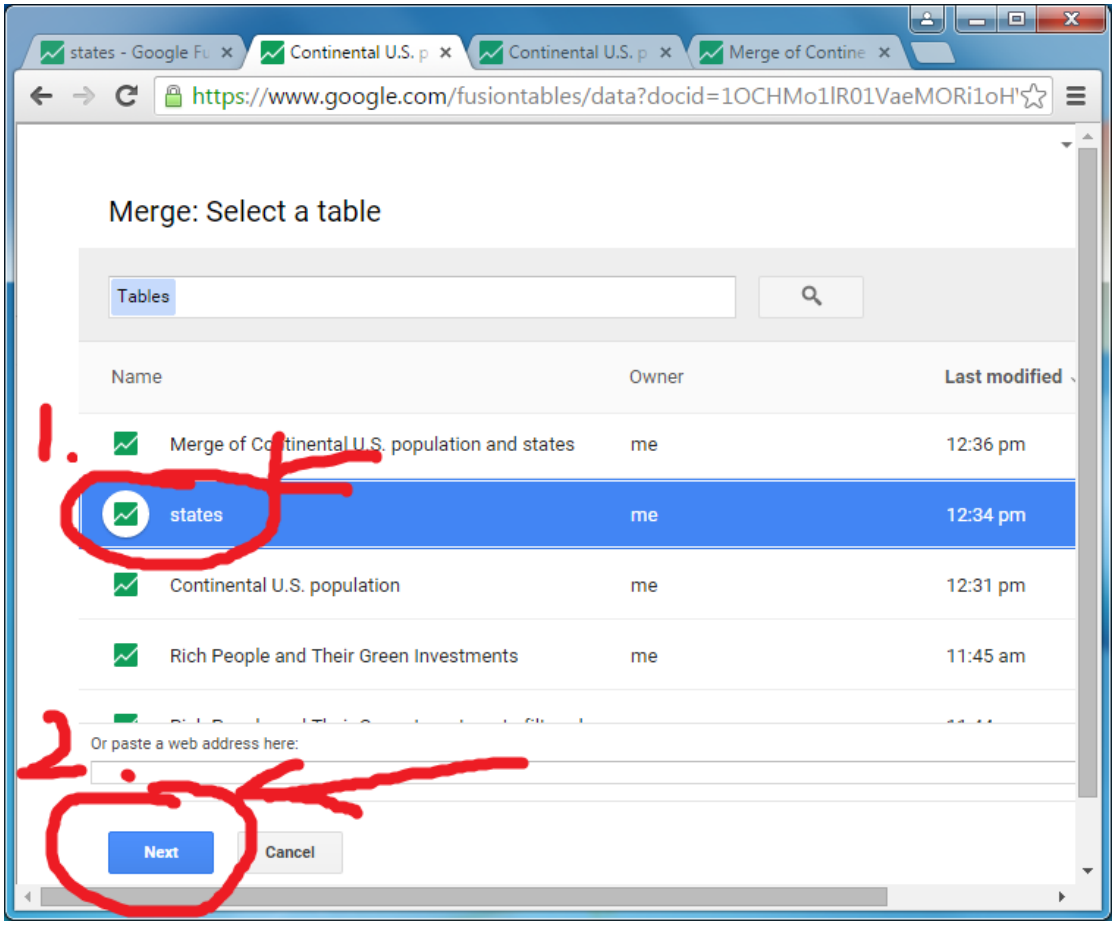


2. Merge tables and visualize the merged table on a map

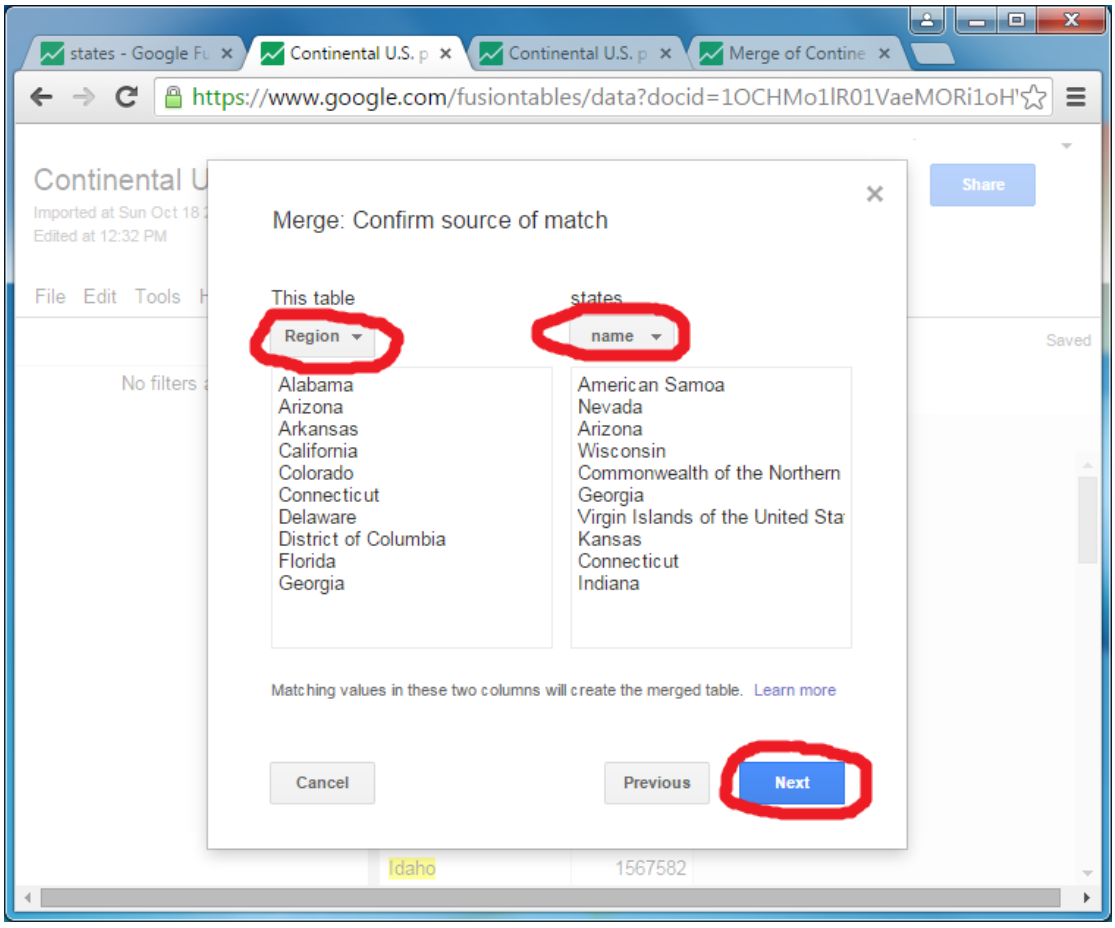
Step 1: Go back to the uploaded population table, click on **"File"** and in the drop-down menu, select **"Merge"**, as shown below;



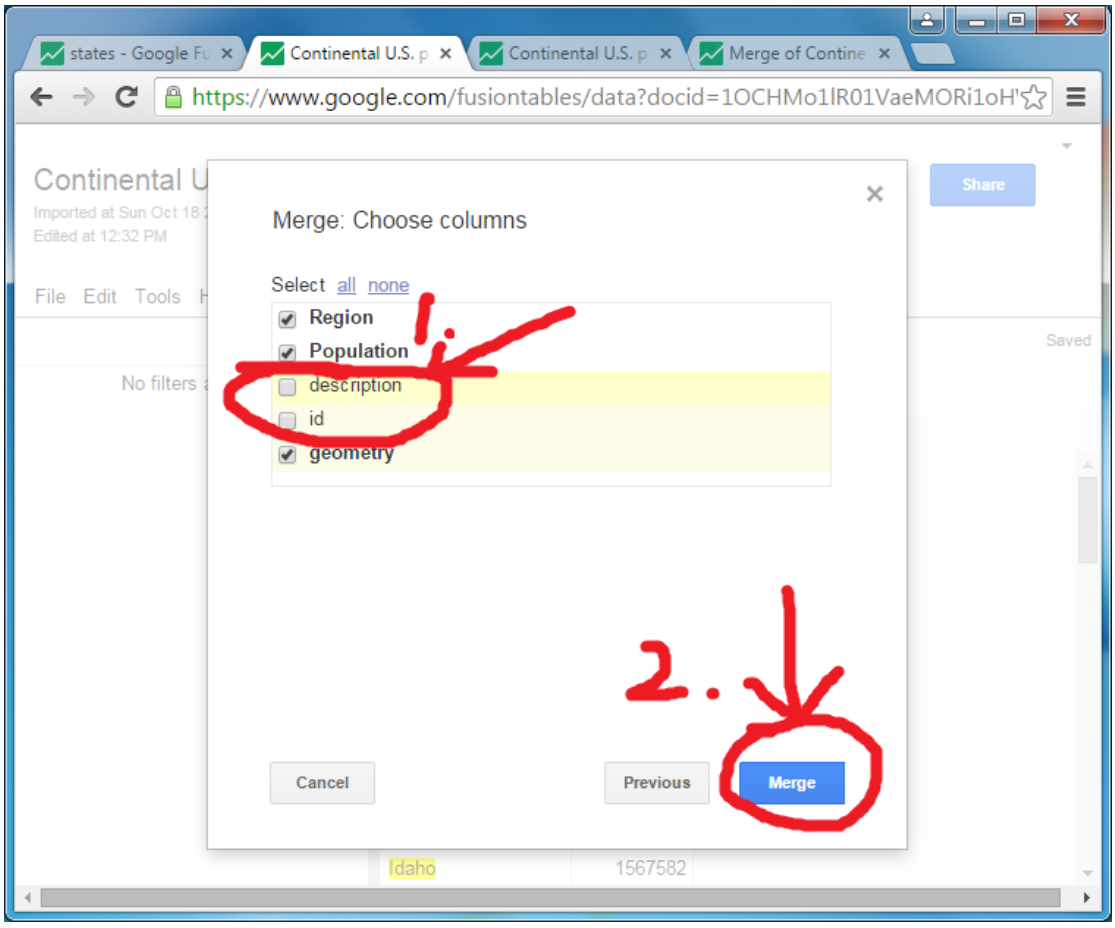
Step 2: Choose "states", and click **"Next";**



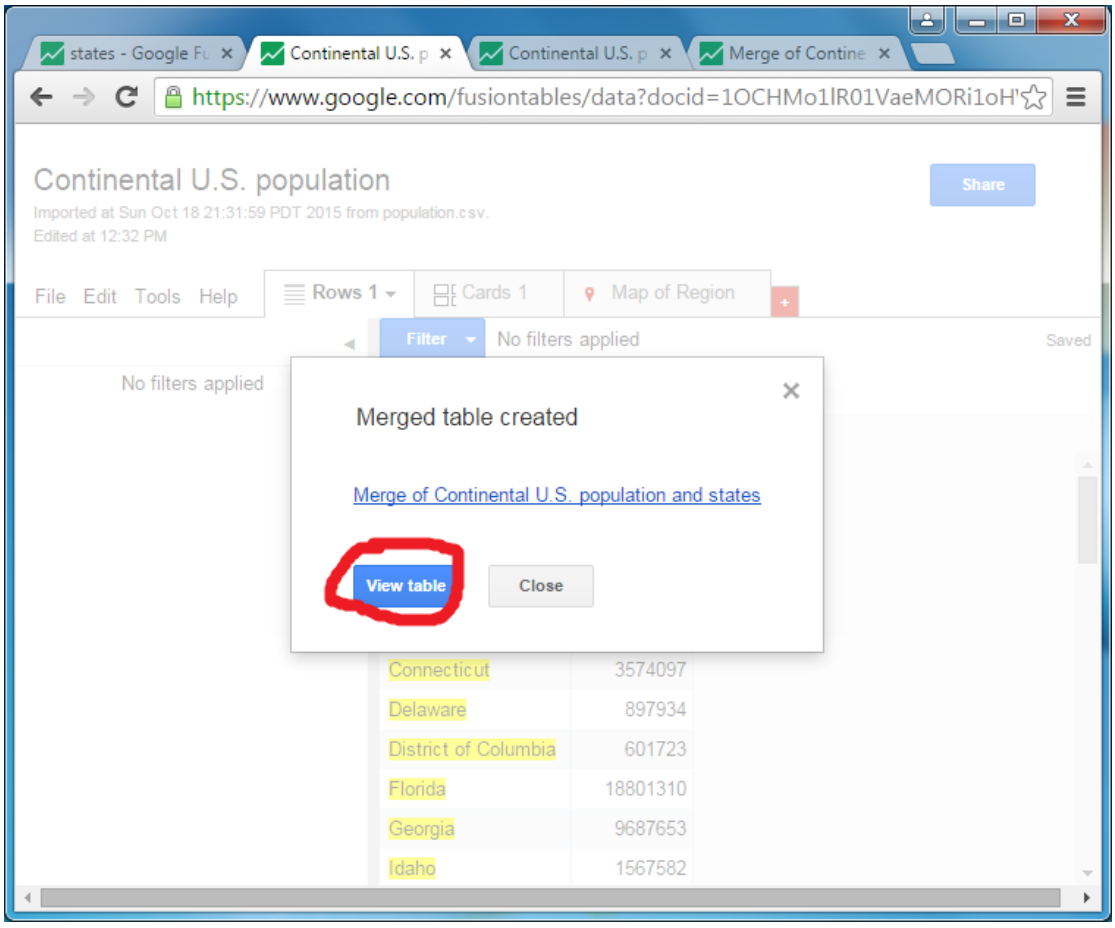
Step 3: We are matching state names in the "Region" column of the first table with state names in the "name" column of the second table, so make sure the left side is the **"Region"** and the right side is **"name"**, click **"Next"**;



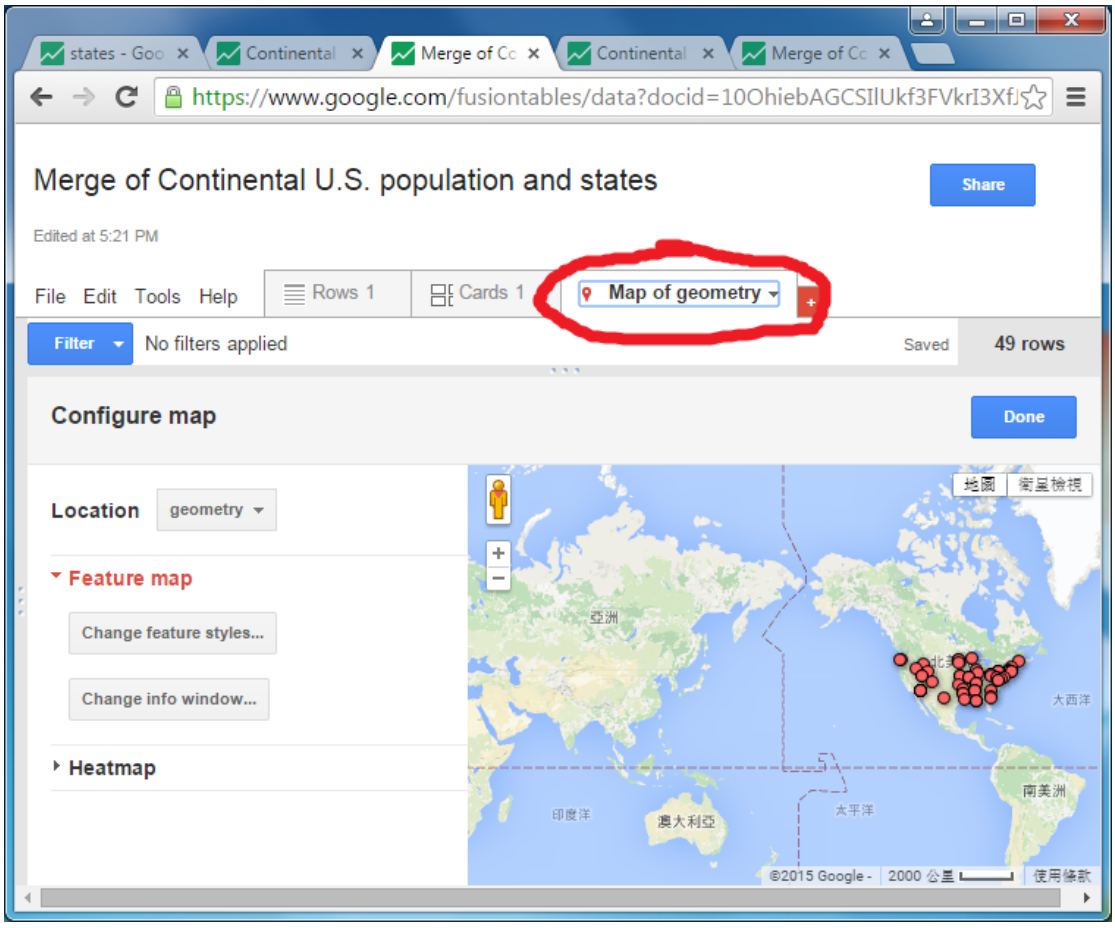
Step 4: The next window asks what columns you want to keep in the merged table. When a table is created (by someone else), it may contain columns that are not pertinent to our purpose, so you may want to skip those columns to avoid a cluttered interface. In this example, we don't need to keep the description and id columns, so un-check them and click **"Merge"**.



Step 5: If everything has been done right, you should see a window confirming the two tables have been successfully merged, the new table comes with the title **"Merge of Continental U.S. population and states"**, click **"View table"** to view the new table.

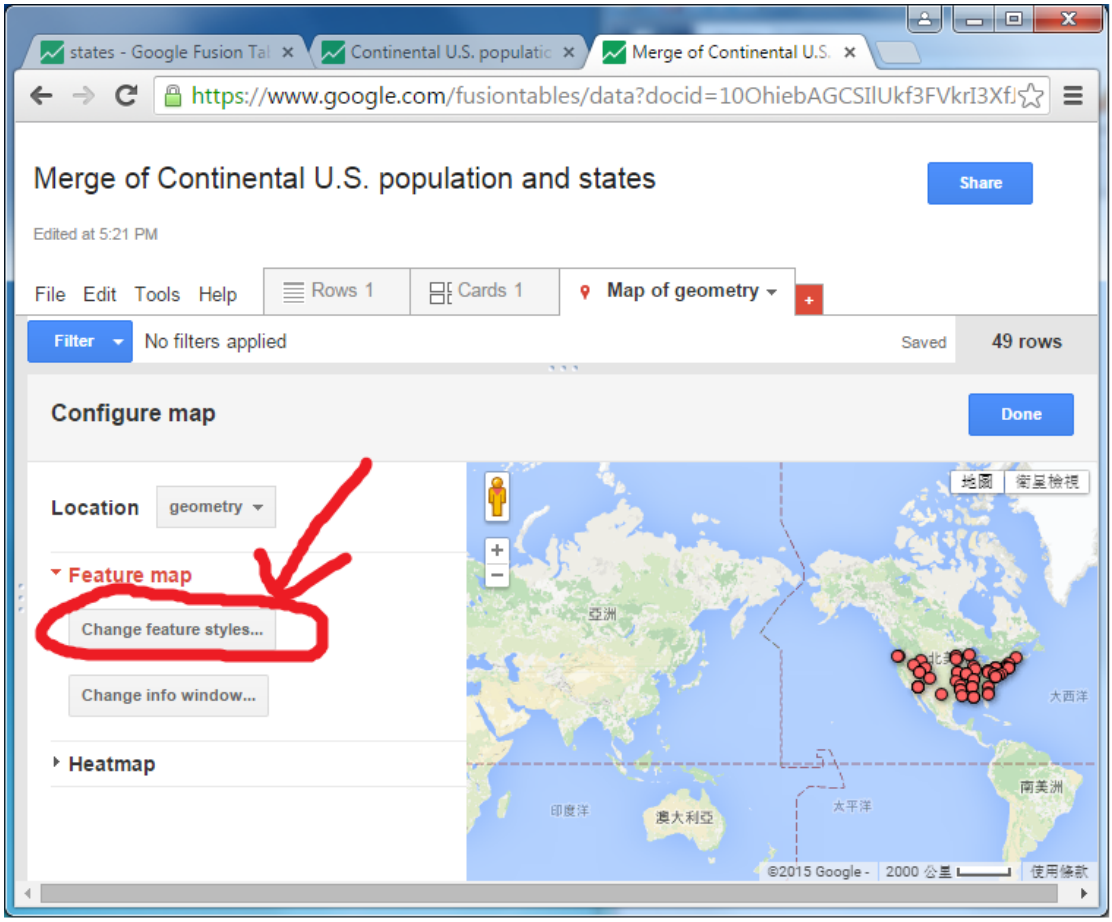


Step 6: When you examine the new table, notice it has 49 rows for 49 states, it also has three columns: Region, population, and geometry. Click on the **"Map of geometry"** tab and you will see a heat map which needs editing and styling.

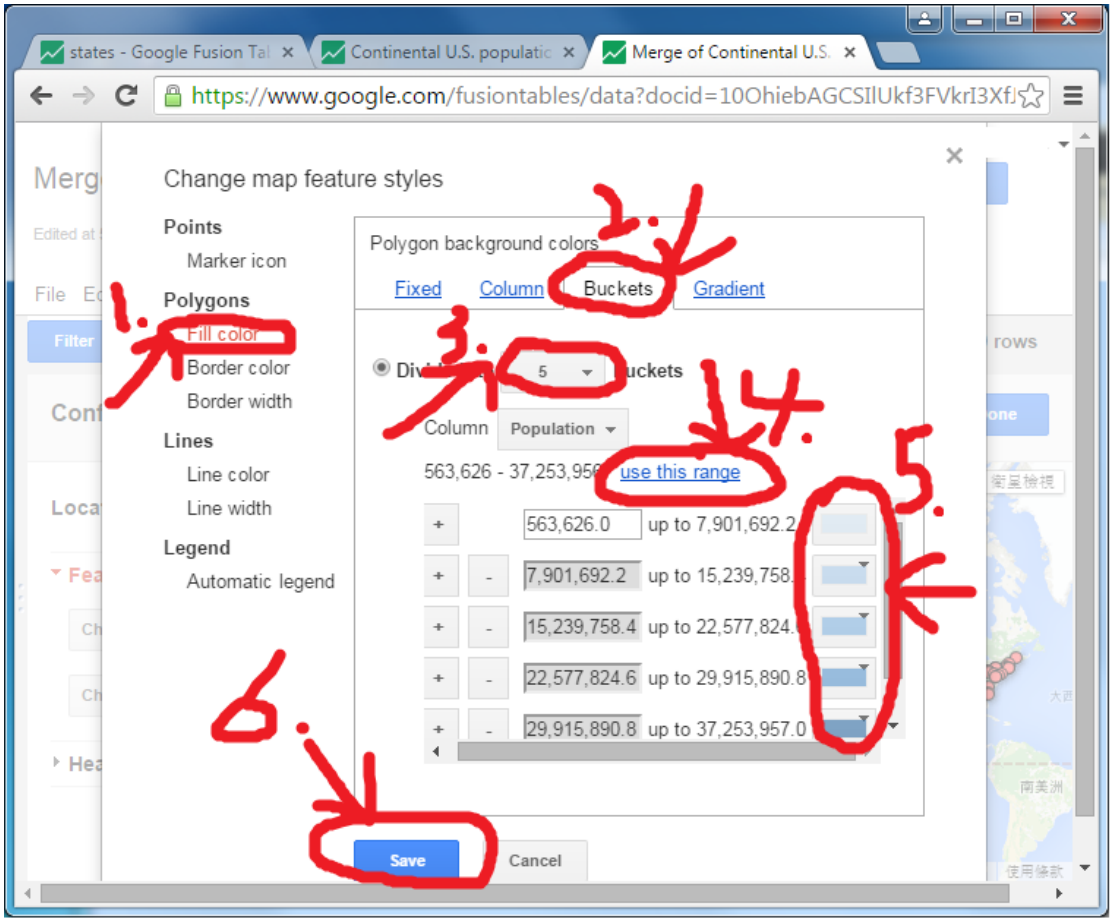


3. Style and share the map;

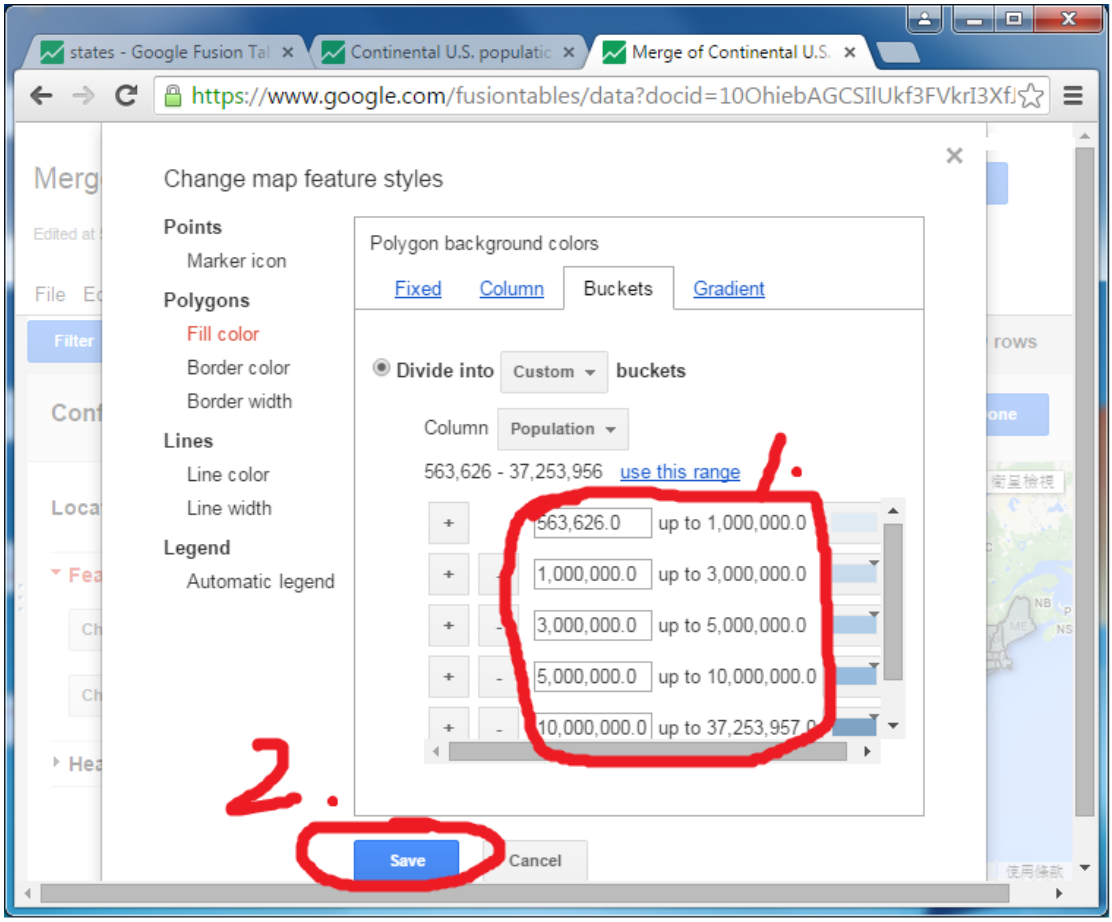
***Step 1*:** We need to make changes to the map styles so that it displays features and functions we desire. Click on **"Change feature styles"** button and you will see the "Change map feature styles" window;



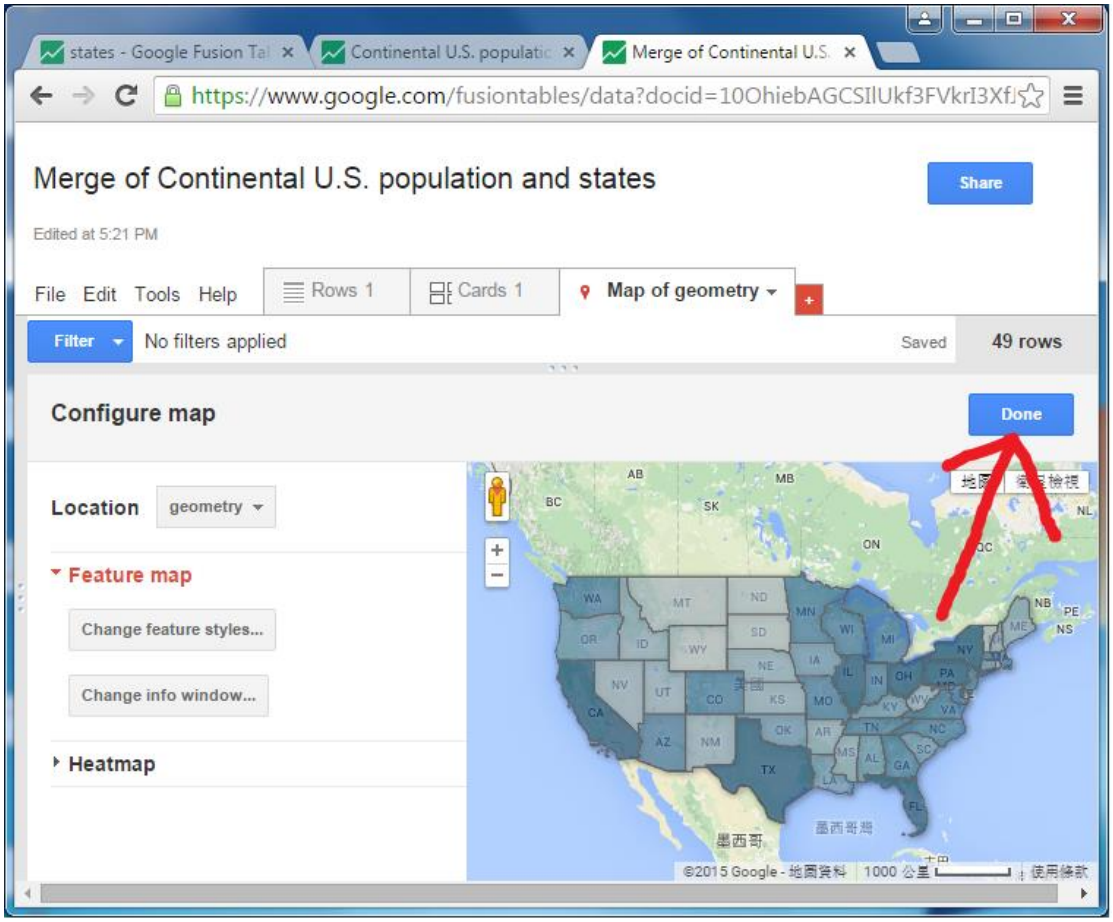
Step 2: Let's change the map styles: we break the range of population numbers into several buckets, select a color scheme and apply a different shade for each bucket; the map legend is not included in the map by default and we need to add one. Do actions like the screenshot below.



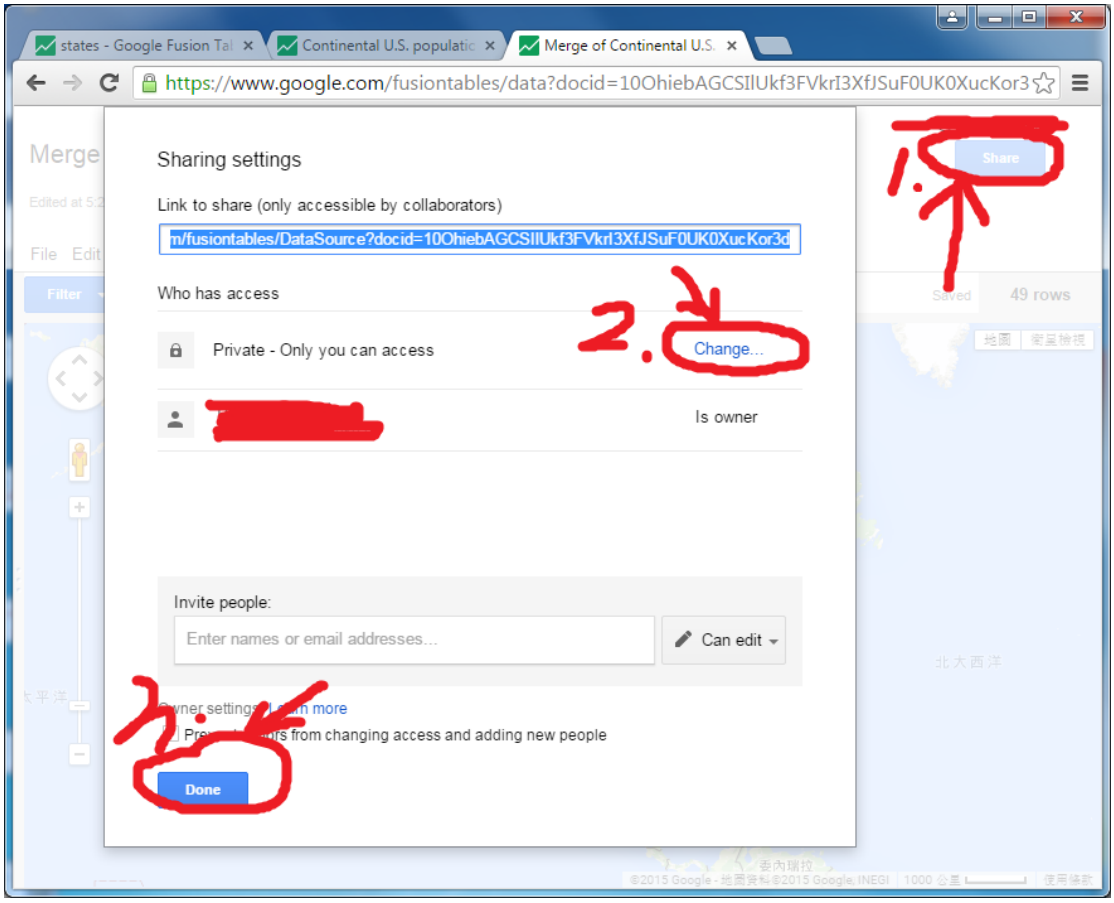
Step 3: But you will see most of the color is the first color, so we could modify the range like below:

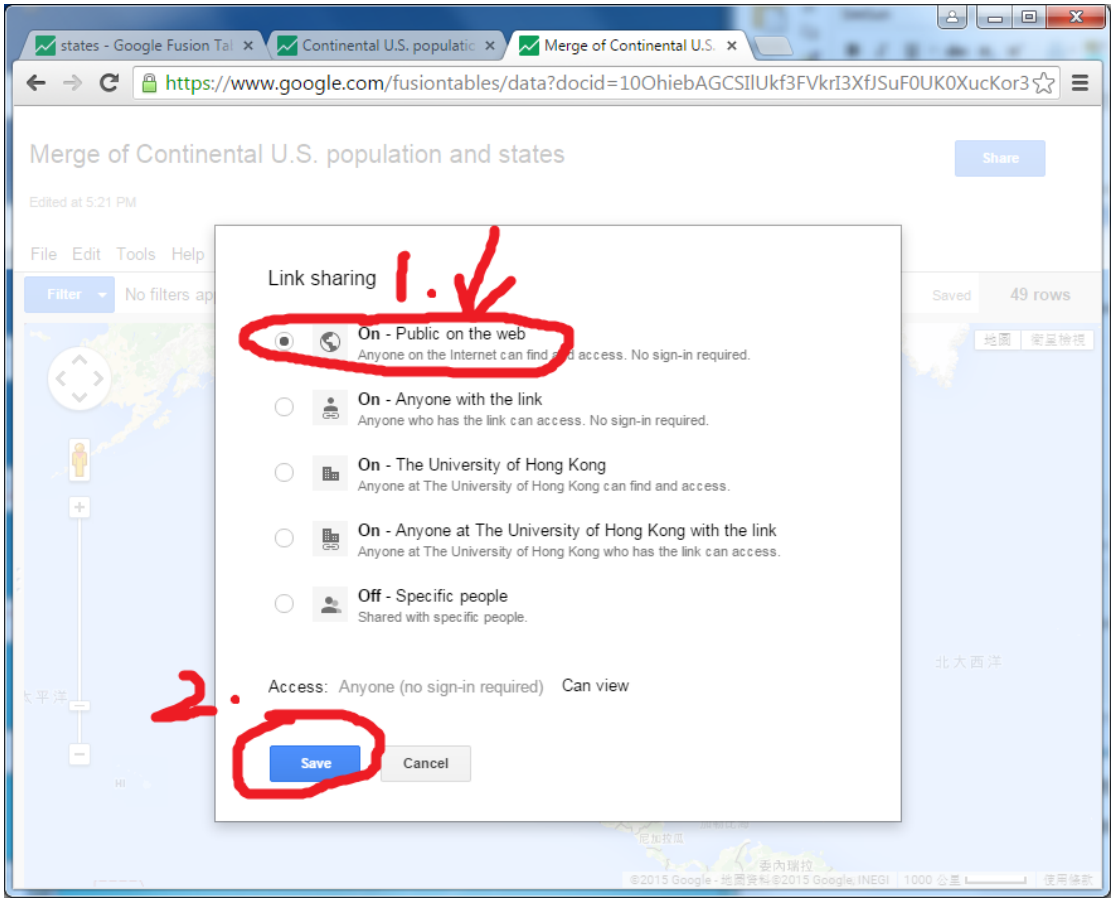


Step 4: in the map review, click the **"Done"** button to finish editing and styling the map. But **BEFORE** you click **"Done"**, you need to zoom in on the map to for a better view of U.S., reason being that by default, the shared map shows a zoomed-out view of the map and other people would have to zoom in multiple times.

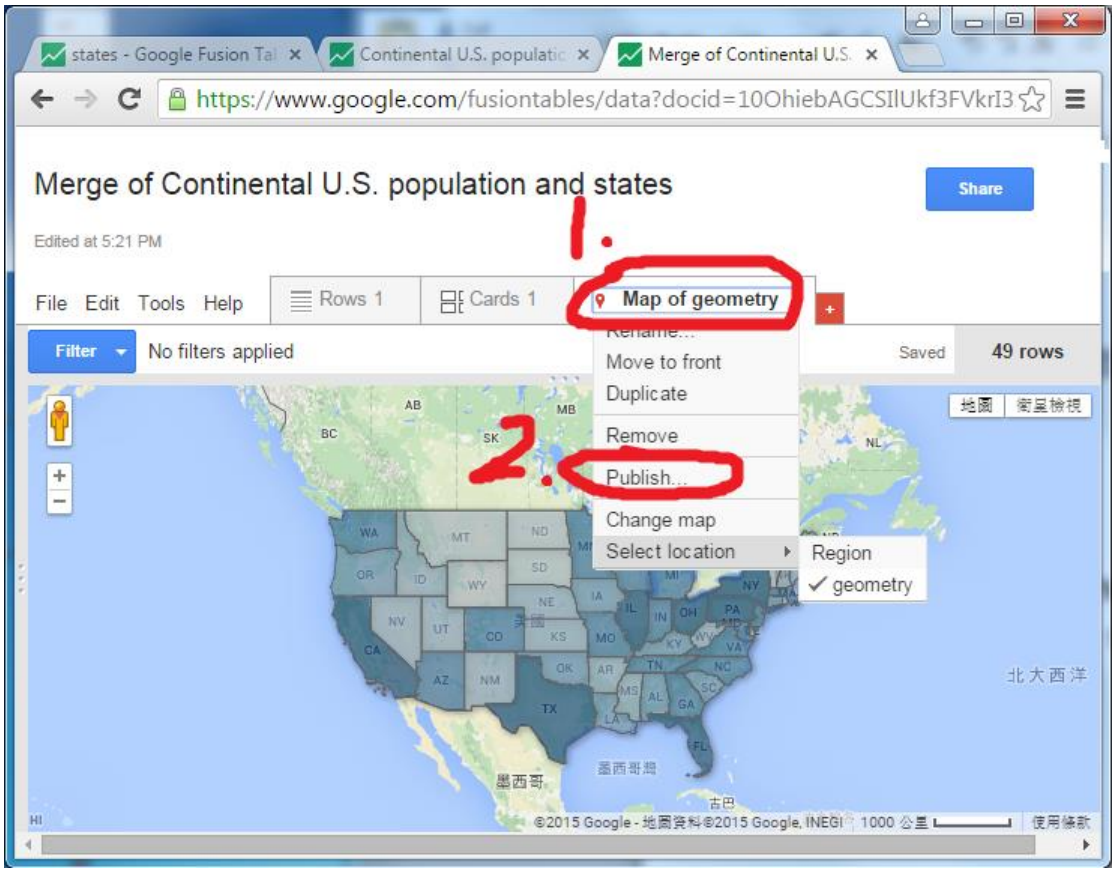


Step 5: **IMPORTANT:** by default, your map can only be viewed by you; before you can share the map in any way, you must change the privacy setting to **"Public"**. To do that, click the "**Share"** button on the upper-right corner of the map, click **"Change…"** and in the new window select the visibility option of **"Public on the web."** Click "**save"** and back to the sharing settings window.


Merge of Continental U.S.
https://www.google.com/fusiontables/data?docid=10OhiebAGCSIlUkf3FVkrI3XfJSuF0UK0XucKor3
Share
Sharing settings
Link to share (only accessible by collaborators)
Who has access
Private - Only you can access
Change...
Is owner
Invite people:
Enter names or email addresses...
Can edit
Done
1.
2.
3.


Merge of Continental U.S. population and states
Share
Link sharing
On - Public on the web
Anyone on the Internet can find and access. No sign-in required.
On - Anyone with the link
Anyone who has the link can access. No sign-in required.
On - The University of Hong Kong
Anyone at The University of Hong Kong can find and access.
On - Anyone at The University of Hong Kong with the link
Anyone at The University of Hong Kong who has the link can access.
Off - Specific people
Shared with specific people.
Access: Anyone (no sign-in required) Can view
Save
Cancel
1.
2.

Step 6: Click **"Map of geometry"** tab and then **"Publish";** in the new window, make changes to the map height and width if you wish, and copy the embed codes. Then you can get the link or "html & "JavaScript" codes.



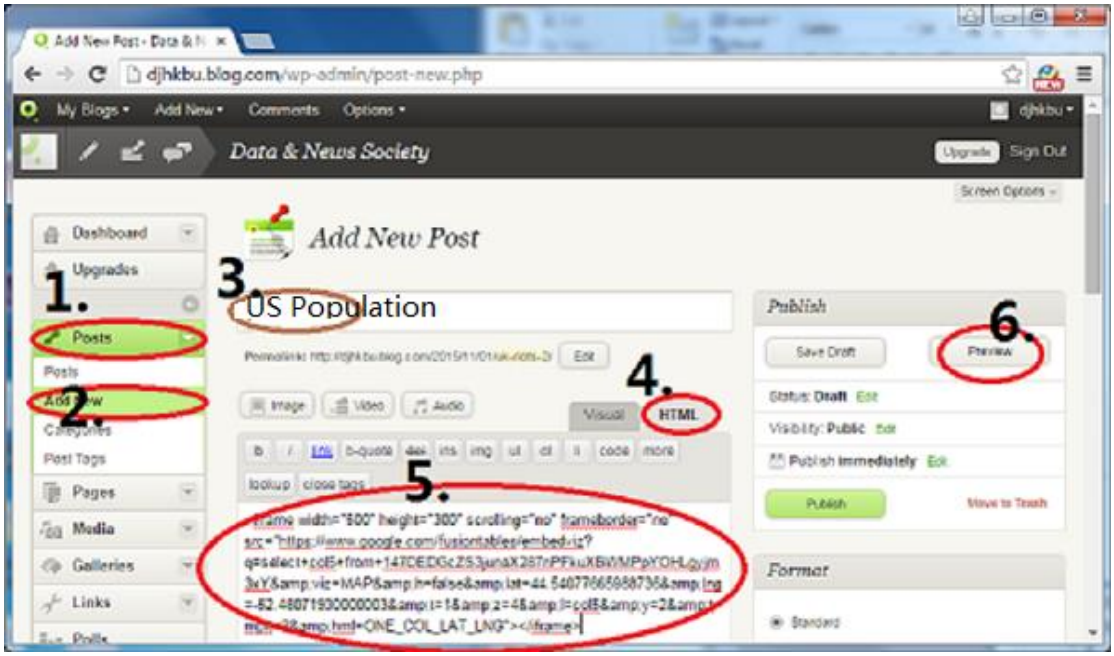
Step 7: Choose "Paste HTML to embed in a website" and copy the codes.

Step 8: Go to the website "blog.com";

Step 9: You can sign up first if you don't have an account;

Step 10. Sign in with the account (our account here is: djhkbu@gmail.com);

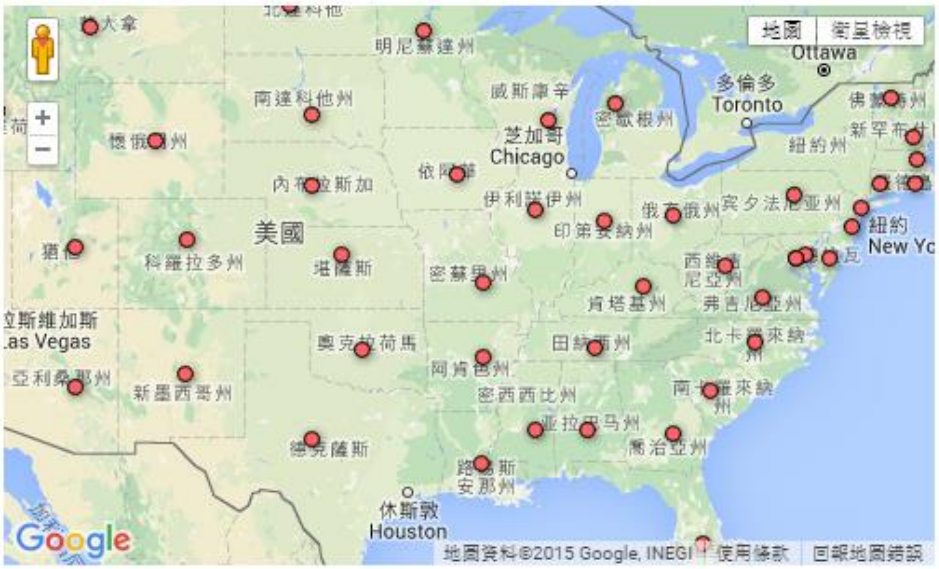
Step 11. Do like the screenshot below:



You will see the result:

Edit

US Population



The map modified by you will be different with mine. If the preview is okay, then you can go back and publish it.