

Intensity Maps with Google Fusion Tables

<http://guides.library.upenn.edu/intensitymaps>

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This tutorial goes step-by-step through the process of creating a simple thematic map (or “intensity map”) of data by countries in the world using Google Fusion Tables (FT). FT is an easy-to-use visualization tool free with a personal Google account. The result is a web map that can be emailed or embedded in a web site.

1. First we need data to map. Go to the [World Bank's data](#) and pick out an indicator. (Hint: something general, like birth rate, will include more countries.) Go to the page for the indicator, click on Download Data, and select Excel File. Save to your desktop.



2. Next, go to [Google Drive](#) and log in with your Google account. Google Fusion Tables are a kind of Google Doc and are stored as Table in Google Drive, but first you must add the Fusion Tables App. Click on Create > Connect more apps, then search for Fusion Tables. Click on the "Connect" button to add the app.
3. Now, when you click on Create in Google Drive, you should see the Fusion Table option. Click on this to create a new Fusion Table document.
4. You'll have several options for importing data. Since you have saved the data to your desktop, you can use "From this computer." Click on Browse, navigate to your desktop, and select the file you downloaded from the World Bank. Click on Next.
5. Fusion Tables will give you a preview of the data. Check to make sure it makes sense, then click Next.

Import new table ×

Column names are in row 1

1	Country Name	Country Code	1960	1961	1962	1963	1964	1965
2	Arab World	ARB						
3	Caribbean small states	CSS	18646290	20164551	21262851	22645400	24368326	262240
4	East Asia & Pacific (all income levels)	EAS	15596699	15493445	15758734	17571709	20134632	224712
	East Asia & Pacific (low income)							

Rows before the header row will be ignored.

New to Fusion Tables? Cancel « Back Next »

Take a peek! [Play with a data set](#) or [try a tutorial](#).

- With the next menu, describe the data. Go back to the World Bank page for the indicator and copy the indicator name into Table Name, attribute the data to the World Bank, and copy in the URL for the indicator's page for Attribution page link. Click Finish.

Import new table ×

Table name

Allow export ?

Attribute data to ?

Attribution page link

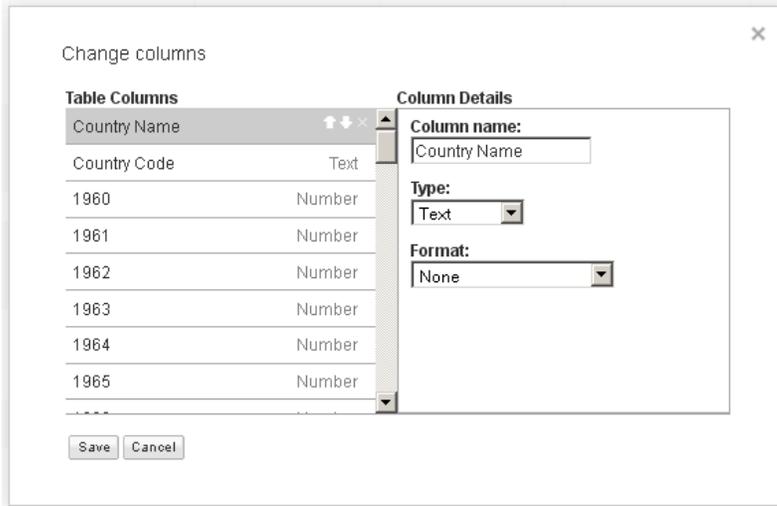
Description

For example, what would you like to remember about this table in a year?

New to Fusion Tables? Cancel « Back Finish

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- It may take a few seconds to import the data, but at this point you should see something that looks like a spreadsheet, with rows for each country or region, and columns for the years. Fusion Tables can create a map with this, but you must first identify which column contains the locations to map. Go to **Edit > Change Columns**. Select the column **Country Names** and change the **Type** to **Location**. Click **Save**.

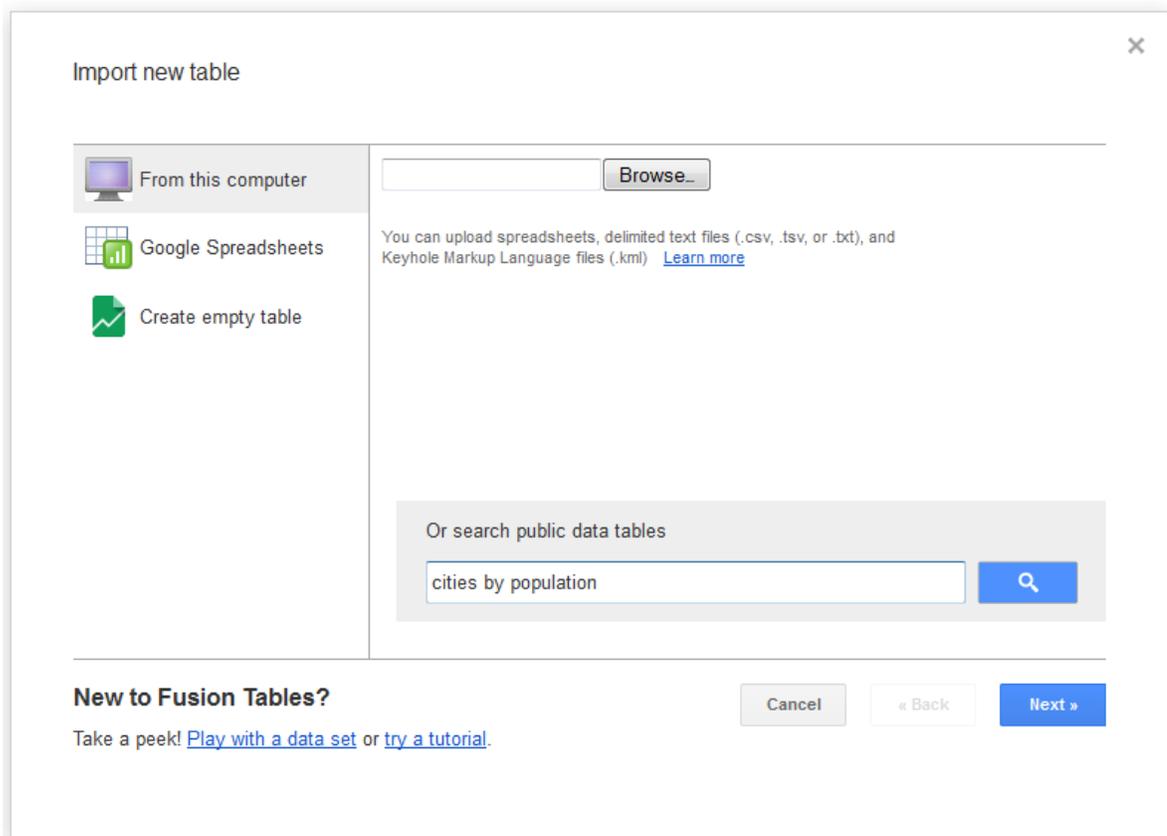


- You should see the country names now highlighted in yellow. This shows that these have been assigned as locations, so we are ready to make a map. The intensity map feature is currently only available in the “classic” Fusion Tables, so go to **Help > Back to Classic Look**. Then select **Visualize > Intensity map**.
- Take a moment to explore the resulting map. Notice that you should be able to change the year displayed using the drop-down menu for **Value**. You'll also notice that there are some countries missing data, including **Russia** and **Egypt**. Take note of any countries that are not shaded in. Next, we will fix these omissions.
- Go back to the table view by selecting **Visualize > Table**. Scroll down to find the row for **Egypt**. Why do you think it didn't show up? Click on the text, change it to “**Egypt**,” and hit enter.
- If you go back to the intensity map view, you should see that **Egypt** is now colored in. Now fix the names of the other missing countries in the same way. (Hint: if you're not sure what Google calls a country, go to the intensity map view and in the box for **Area**, start typing what you think it might be called, and it will tell you Google's version.)
- When you are satisfied with the way the map looks, you are ready to share it. While you are viewing the intensity map, click on “**Get embeddable code**.” You will have to change the visibility so it is public, and then you can email a link or use the code to embed in a website.
- Let's experiment. In the box next to **Area**, enter **United States** and hit enter. Why do you think the map looks like it does?

Mapping Points with Data from the Web

This tutorial covers how to create a map in Google Fusion Tables showing points, rather than areas. These maps can be made with data in CSV or Excel format, but in this tutorial we will use data from tables in webpages.

1. From within Google Drive, select Create > Fusion Table.
2. You should see the Import new table dialog box. Under “Or search public data tables,” type “cities by population” and hit Enter.



3. What you see are “Web Table” results from Google Tables. Most are from Wikipedia. Look for “List of United States cities by population” and click on Import data.

Web

Web Tables

Fusion Tables

Send Feedback

[List of United States cities by population - Wikipedia, the free ...](#)
http://en.wikipedia.org/wiki/List_of_United_States_cities_by_population

New York	Los ...	Las Vegas	Albuquerque ...	Stockton	Cincinnati ...
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Show less (286 rows / 10 columns total) - Import data

2011 Rank	City	State	2011 Estimate
1	New York	New York	8,244,910
2	Los Angeles	California	3,819,702
3	Chicago	Illinois	2,707,120
4	Houston	Texas	2,145,146
5	Philadelphia	Pennsylvania	1,536,471
6	Phoenix	Arizona	1,469,471
7	San Antonio	Texas	1,359,758
8	San Diego	California	1,326,179
9	Dallas	Texas	1,223,229

[List of United States cities by population - Wikipedia, the free ...](#)
http://en.wikipedia.org/wiki/List_of_United_States_cities_by_population

Show more (27 rows / 7 columns total) - Import data

- It will ask you to select the row containing column names; this will be the first row. Click on “Import to Fusion Tables,” then “See table.”
- You should now see how the table looks within Fusion Tables. In order to map the data, you will have to tell it which column contains the location for each row. In this case, we have the city name and the latitude and longitude. Fusion Tables can use either of these to map the cities, but the latitude and longitude is more accurate. (It gets confused by places like Ontario, California, or Odessa, Texas.) So, the first step is to designate the “Location” column as the location.

Click on the down arrow at the top of the “location” column and select “Change...”

	Location
20	Change...
77	Find...
03	Hide
	Sort A to Z
	Sort Z to A
96	29.7805°N 95.3863°W
21	40.0094°N

In the next dialog box, change the Type from Text to Location, then click Save Changes.

The image shows a dialog box titled "Change column" with a close button (X) in the top right corner. Below the title is a horizontal line. Underneath, there is a "Name" label followed by a text input field containing the word "Location". Below that is a "Type" label followed by a dropdown menu. The dropdown menu is open, showing four options: "Text", "Number", "Location", and "Date/Time". The "Location" option is currently selected and highlighted. Below the dropdown menu is a checkbox labeled "Validate data" followed by a blue link that says "Learn more". At the bottom of the dialog box, there are two buttons: a blue "Save changes" button and a grey "Cancel" button.

6. Repeat step 5 for columns City and State, but change the type from Location to Text.
7. Now, click on the Map tab above the table. It may take a minute to assign the data to the appropriate locations, a process called geocoding. When it's finished, you should see the cities mapped as points on a map.