



Advanced Online Media

Dr. Cindy Royal

Texas State University - San Marcos

School of Journalism and Mass Communication

Google Fusion Tables

Google Fusion Tables is a free platform that enhances the Google Charts API. You can import and work with data to create maps and charts.

You'll need a Google Account, that's it. Go to Google Drive. You will see any items you have created. We'll be working with various types of maps and charts

Importing Files

Let's use the music files we created previously. Go back to SQLite Manager in Firefox. Tools, SQLiteManager. Use Tools, Export Table to export the bands and then the genres tables. Use the First Row Contains Column Names option. This will create bands.csv and genres.csv.

Now we will import them into Fusion Tables. Go to Google Drive. Make sure you are logged into a Google account. Choose the Create button, and select Fusion Table. Now select the file and import it. You will have to do this for both files. You should then see the bands and genres tables under My Drive.

You can look at the files to see what's in them. And there are other features that allow you to work with these tables.

Filter

You can filter on any variable to just see those items. For instance, you can see only the bands from Austin. You can create a View of this filter or you can Download this (File Menu).

Summarize

Remove the filter by clicking the x. Let's summarize on the bands table by city, to see how many bands are in each city. Go into the bands table. Choose Tools, Summarize. Pick the field that you are going to summarize. In this case, it's city. You don't have to choose anything else. Save it, and you will see a new table that contains the summary.

You can sort this by city to see them in alphabetical order. We want to be able to plot this information, but we have to do a few things to get this summary as a new table. Choose download to get this as a csv. Then Create a new Fusion Table. (I am not sure why you are not able to create a View that recognizes the summary column as a filterable column until you do this step).

Charts

Now that we have our summary as a new table, we can filter to get the top 10 cities in Texas. Sort on the count field from highest to lowest. See where the break is for the top 10. Choose to filter on count, and use the range 90 – 3000. This should produce 10 cities.

Click on the plus sign near the tabs. Choose Add Chart. Click on the pie chart. You will get a chart that has the top 10 cities in Texas by number of bands. You can sort by City. If you click on Change Appearance, you have a lot of customizing features to name the chart and select colors.

You can Publish the chart by choosing Tools, Publish. Charts must be public to be published. You can then use the embed code. If this chart is modified, it automatically changes the embedded chart.

Merge Tables

Remember when we merged tables using SQLiteManager? We are going to do the same with Fusion Tables. We are just working with primary genres. With the bands table open (make sure you clear the summary and see all the rows – Tools, Summarize, Clear Summary), choose File, Merge. Check the genres table. Then you have to select with rows to match. You can match the genres_id from the bands table to the id from the genres table. This will create a new table including all the info you want.

With this merged table, you now see the genres for each band. Using the same technique we used to chart the top 10 cities, chart the top 10 genres in Texas music.
Hint:

- Summarize by genre name
- Download the csv
- Re-import into Fusion Tables
- Filter on the count
- Add a chart

There are other charts that you can use. Use the same judgment that we have been using to decide which chart type you should select.

Mapping

Fusion Tables can also provide powerful mapping features. If you have a full address (must be complete in one column) or latitude, longitude columns, Fusion Tables will place items on a map. It can even place items based on zip code or city, state, but it works better if each location has its own point. Fusion Tables will try to identify a location field, but you can also use Change under the Column to establish a Location column.

I have provided a list of City of Austin building permits at:

https://www.google.com/fusiontables/DataSource?docid=1V_N1QwrLD_MZ8z8zugdPXjNbvoKom7Cs_cesPd4#rows:id=1

You can link to this table and click on the map tab to see how it mapped these full addresses. It initially takes a few minutes to produce the map, depending on the number of data points.

If you don't have full addresses in a single column, you should use Excel to concatenate the strings from multiple columns into one column, then reimport the table. Excel uses the & for concatenation.

Mapping with Shape Files

You can also plot items on a map and use shape files in kml format to identify areas. KML stands for Keyhole Markup Language, and it is a format that is created in Google Earth. More info here: https://developers.google.com/kml/documentation/kml_tut.

You first need to find some data that is presented by jurisdiction, something like state or county. I have some US crime statistics for you to use. It includes Robbery, Murder and Violent Crime.

Import this data into Fusion Tables (Create, Fusion Table). You can then import the shapefile (State KML). You could also find this file on the Web and connect to it via url.

With the row tab selected in the Crime file, choose File, Merge. Find the State kml file. Choose the fields you want to merge and what you want to show in the new table.

Now you have shapes associated with your jurisdictions that we can map.

Click on the plus sign by the tabs and say Add Map.
Choose Change Map Styles.

Under Polygon, choose Gradient. Choose Violent Crime. This will allow you to select the range (you can let it select the range in the file), and select the colors to plot the differences on your map. Higher incidences will have darker colors.

You can also do this by Buckets, by selecting your own breakpoints and colors.

You can choose the fields you want to show in the info window under Change Info Window Layout (look for the dropdown arrow on the tab). You can customize with HTML.

Do a map each for Murder and Robbery. Choose the proper way to illustrate the statistics by state.

Just like with the pie chart above, you can make the map public and share it, embed it on a Web site. With maps, you can also get the full html/javascript that you can integrate into your site via the Google Maps API. More to come on this.