



## Coding and Data Skills for Communicators

Dr. Cindy Royal

Texas State University

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. It is particularly good for mapping with shape files.

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.

And you'll need a couple files to upload. Go to <https://github.com/cindyroyal/fusion> and Download the repository.

#### Mapping

Fusion Tables provides 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.

Once the map is created, you can work with the info window and features styles. This map also works well as a heatmap, displaying the locations with the most bands.

#### 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](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 in csv format. It includes Robbery, Murder and Violent Crime. US States Crime.csv

Import this data into Fusion Tables (New, 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.

Now you have two files to merge. With the row tab selected in the Crime file, choose File, Merge. Find the State kml file. Choose the fields you want to merge (State Name) and what you want to show in the new table (choose everything for now). You have a file that has merged on the state name.

You can use the shapes associated with your jurisdictions that we can map.

Click on the plus sign by the tabs and say Add Map. You may have to move the display to see the US in the center of the screen.

Choose Change Feature Styles.

Under Polygon, Fill Color, 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. Make sure you adjust the high and low. You can add categories for the gradients.

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.

You can make the map public and share it, embed it on a Web site. See the Share button to make Public and Tools, Publish to get the embed code. With maps, you can also get the full html/javascript that you can integrate into your site via the Google Maps API, just as we did in the charting exercise. You may need to adjust the zoom level, width, height, center in the code.