Google Fusion Tables: A Multi-User Data Viewer

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Overview:

Source 1: Chrome Webstore

Many students and professionals have had the opportunity to utilize many of the multi-user products available through Google, such as Docs, Sheets, Slides, Calendar, etc. While these tools are made to mimic popular software offered by Microsoft, they remain free to anyone who has a Google account (every student at Iowa State University), and allow individuals to collaborate on projects virtually. Although the tools previously mentioned remain the most popular, these tools only cover a small portion of what is available through a standard Google account.

A tool gaining popularity as more individuals become involved in web mapping and data analysis is Google Fusion Tables. Like Google Sheets (or excel) users can upload and view data within this program, and make the data available for others to interact with. Unlike these popular tools, this program also includes the capability to join data from multiple sources, allowing users access to filter and query against a multitude of information not normally available (Gonzalez et al, 2010). With the procured data, users are free to not only make graphical representations, but can also geographically visualize the data through either coordinate locations, geocoding of addresses, or uploading location data from Google Earth. The visualizations can be

shared through links, accessed in google drive, embed in websites, or even used as layers within the Google Maps API.

Getting Started:

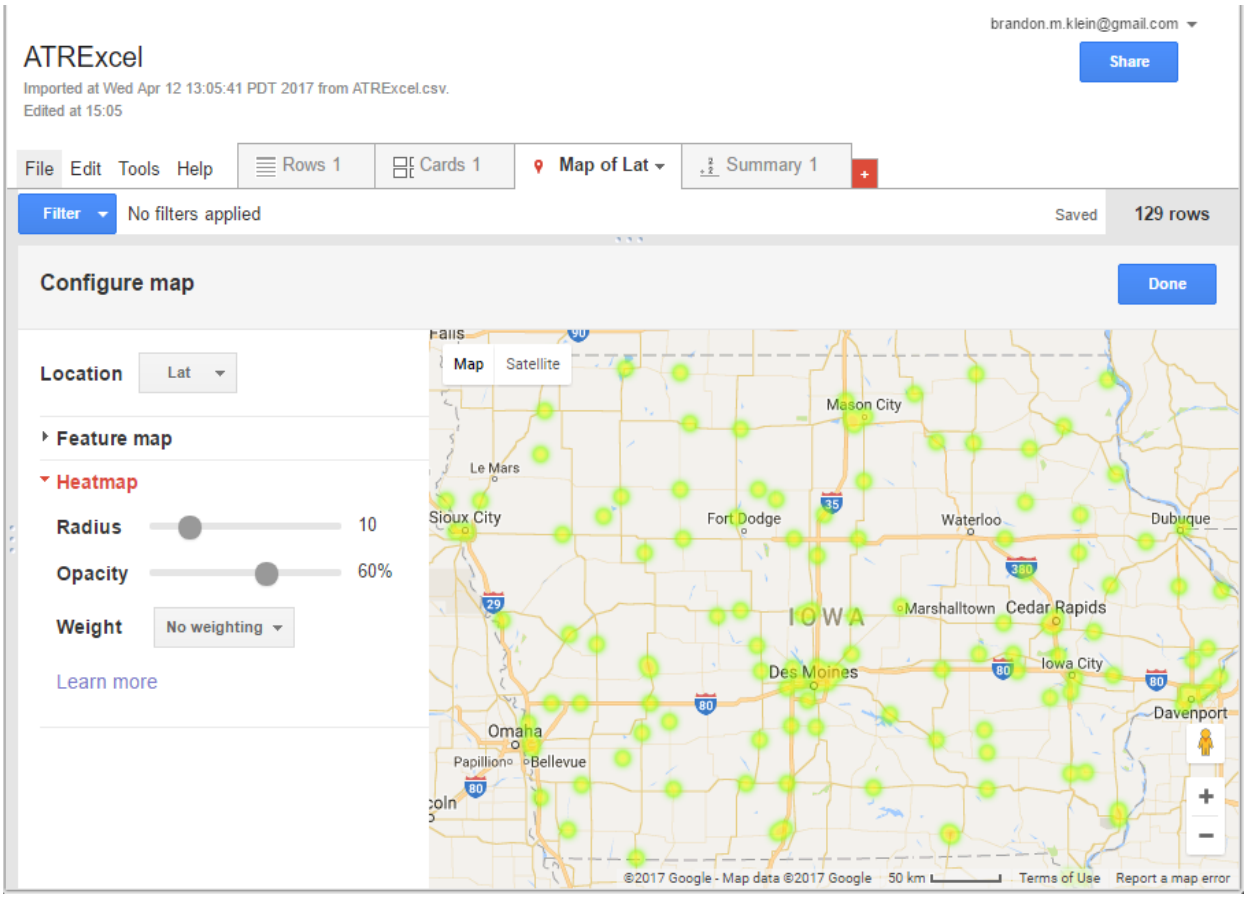
Like many of its other tools, Google makes getting started with Fusion Tables a breeze by offering a "Create a Fusion Table" tutorial that allows the user to select their own data and learn how to incorporate it into the tool (Google Support, 2017). If you are using a Chrome web-browser, there isn't even a need to sign into your account since it has mostly likely already been done for you, and all your progress will be saved to your Google Drive.

After selecting your table and defining the parameters of your data, you are taken to the Fusion Tables dashboard, which populates a table view of your data, a card view in case you are interested in seeing the data as separate entities, and a map view if the data meets to geographic requirements, into easily accessible tabs (Hardenburgh, 2012). Each tab allows the user to filter data independently, allowing other tabs to be opened for unique summaries and projects.

Geographic Capabilities:

The figure below illustrates the map view tab on the Fusion Tables dashboard. From here, users can filter the data that they would like to appear on their web map, change the data feature style for each data location, adjust what data is displayed in each feature's pop up, or, as shown below, create a heat map of the data's features (Smith, 2015). Like other Google tools, users could share this workspace with other users, who can then adjust the feature parameters as well. Once complete, the editor can choose to publish the map, and the tool will prepare a link, embed HTML, and the HTML and JavaScript code to include the map wherever necessary. This screen also gives the users

the ability to adjust the map width and height parameters, and automatically includes linkage to the Google Maps API in the HTML and JavaScript Code. An example workspace to use can be found here: Iowa DOT ATR Locations Fusion Table.



FusionTables Layer

Although Google Fusion Tables allows the user to publish the map using a link to Google Maps API, the Google Maps JavaScript API is also experimenting with using Fusion tables as layers within a web map, simply called FusionTables Layer (Google Maps APIs, 2017). This technology allows users to bring in up to five separate Fusion Tables maps, and set query and data parameters right inside the website code. This accessibility allows users to constantly connect to and run queries on an updated dataset, making the maps responsive to a changing environment.

To conclude, Google's Fusion Tables allows users to connect with data outside of their typical static datasets, and when combined with their API software, the ability to make geographic data representations a breeze. Aside from the ability to join and connect to other existing datasets, the sharing ability allows multiple users to work on the same project, something not typically found in even advanced software.

References

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