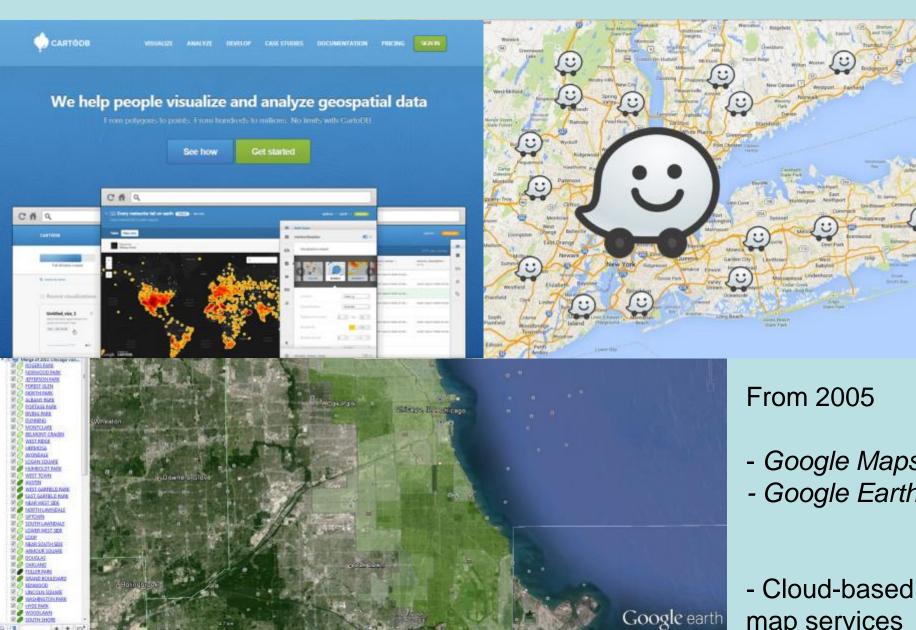
WEB CARTOGRAPHY

GOOGLE FUSION TABLES

MAP-BASED SERVICES ON THE WEB



- Google Maps,
- Google Earth,

map services

MAP-BASED SERVICES ON THE WEB

Geovisualization (Gvis)

Geoweb

Volunteered Geographic

Spatial Literacy

Information (VGI)

Virtual Globes

Mapping mashups

Geotagging

Open Source

Data Cloud

User generated content

Online maps

Geoblogging

Neogeography

Crowd-sourcing

Mass Geography

Lay Cartographers

Neocartography

Big Data

Why Google?
GOOGLE GEO APIs



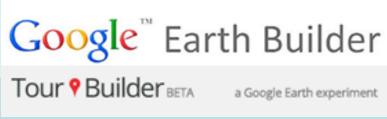


















Launched on: 5 June 2009

Disadvantages:

- Data can be only represented using choroplets, heat maps or simple symbols
- The user cannot modify the content of the base map, only its design

Advantages:

- Quick and easy data linking to a "standard map", quick and easy representation on Google Maps.
- Fast, easy and wide publication on the Web

Login only with e-mail address in Gmail... Compulsory!!!

If only a data table is imported:

 By default, the data is represented as points in Google Maps – we can change the fill colour of the symbols in each category

If we open a table + map (based on shp file with polygons):

- Two types of choroplet maps can be made:
 - With continuous filled categories (Buckets)
 - With a continuous colour gradient by each category (Gradient)

Help: http://support.google.com/fusiontables/answer/184641?hl=en



Search this site

About Fusion Tables Search Example Gallery Help

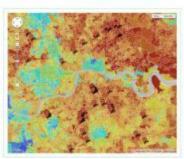
Fusion Tables Example Gallery

The application | Using the API | Any shape boundaries | Info-rich windows | Making data work | Data gathering | Crisis Response | Demographics

New Features Tour Video Gallery **Example Gallery Tutorials**

Talks & Papers Request a feature Fusion Tables API

Follow @GoogleFT on Twitter



COURSE OFFICE AND ADDRESS OF THE PARTY NAMED IN COLUMN 2 IN COLUMN

Tell the story with data

The Guardian DataBlog maps riot locations and suspects' addresses in context of social factors, See site. How it was done

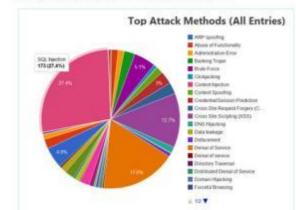
Host data online

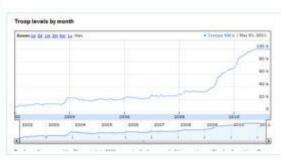
Australia offers government datasets online in Fusion Tables format. Citizens can view, filter and download hosted data with just a browser. See site.

Gather data in realtime

Google election coverage handled realtime data updates during the Iowa GOP primary to deliver results during the night as ballots were counted. See site. How it was done

Simple infographics with Fusion Tables



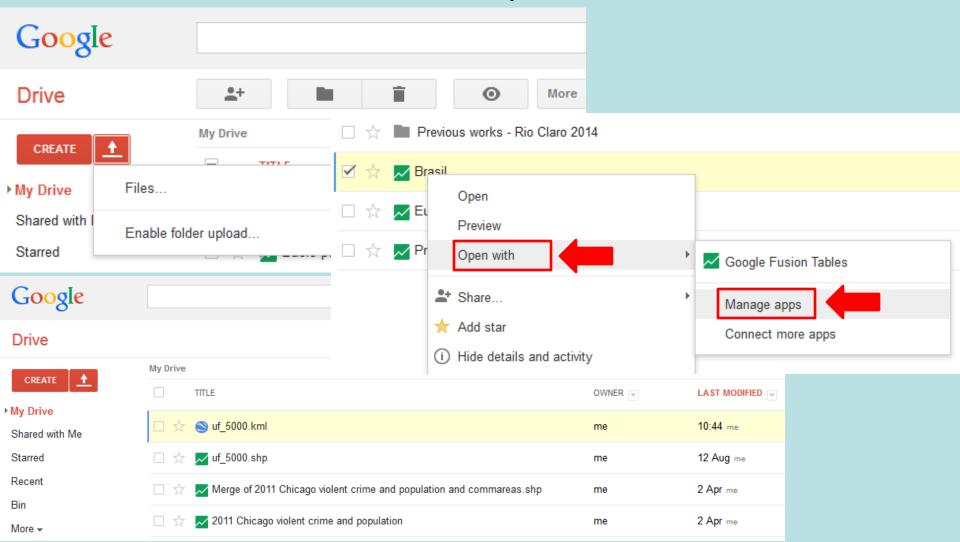


Troop levels over time

The Al Jazeera timeline shows how troop levels in Afghanistan have changed in the last ten years. See site.

https://sites.google.co m/site/fusiontablestalk s/stories

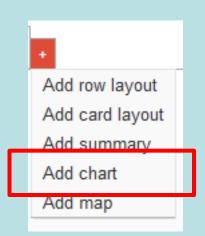
FT files are stored in Google Drive...How to indicate to Google Drive to use Fusion Tables by first time:

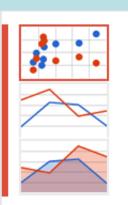


What is offered?

- Edition of data in tables, their visualization with charts and maps
- Import: text files (pl. csv),
 Excel tables (xls, xlsx) and
 Google Earth files (kml).
 Max. size to import 100 Mb

Creating charts.....

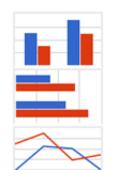




Scatter chart

Zoomable line chart

Area chart



Column chart

Bar chart

Line chart



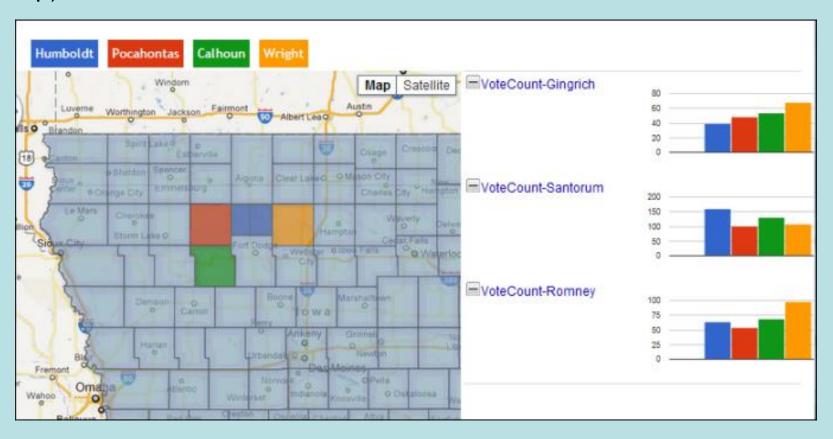
Pie chart



Network chart

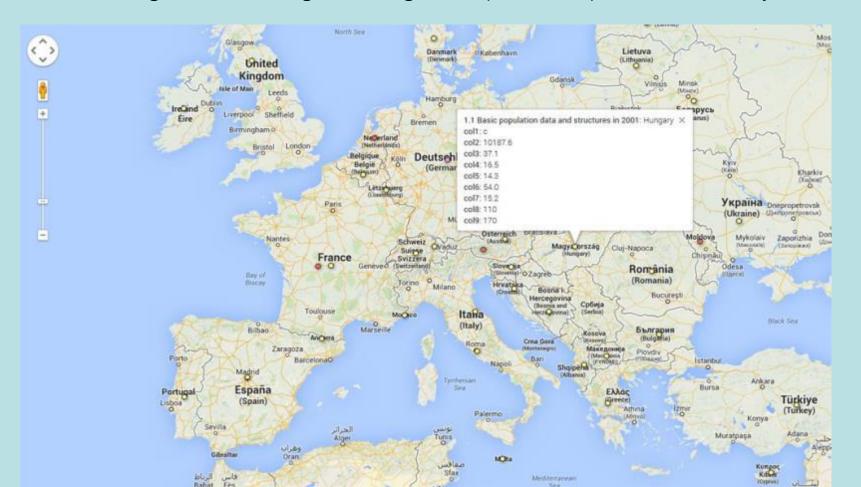
Types of charts:

Bar charts connected to maps (not on the map, just interactively annexed to the map):



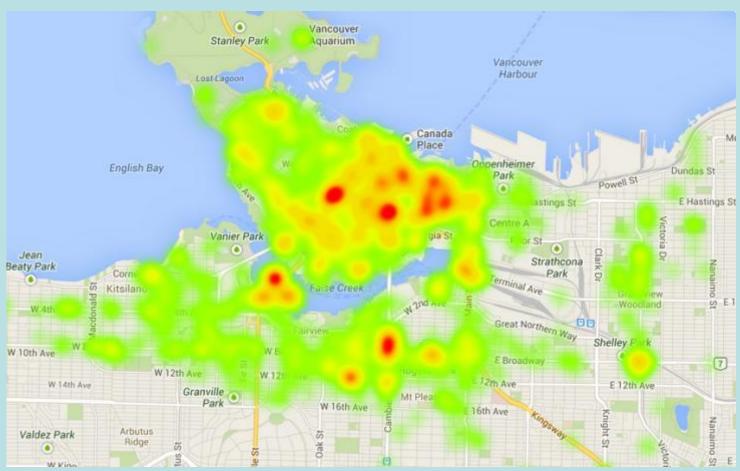
Data representation on maps:

- 1) If only a data table is imported:
- By default: data visualization as points in Google Maps the filling of points can be changed according to categories (intervals) determined by the user.



Data representation on maps:

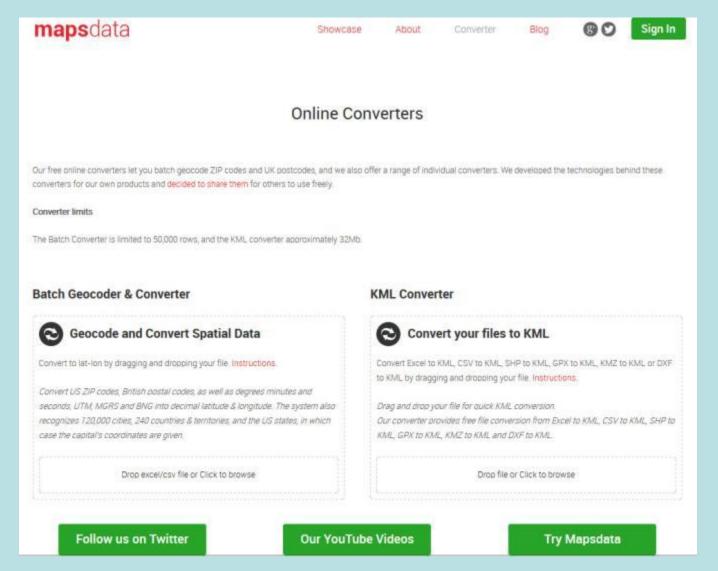
- 2) If data table + points are used:
- Heat map Bike theft and auto crime in Vancouver:



http://blogs.vancouversun.com/2013/12/27/get-the-raw-data-for-our-bike-theft-and-auto-crime-series-right-here/

Converting shape files: shpescape.com
Converted files are directly copied to our own Google profile...



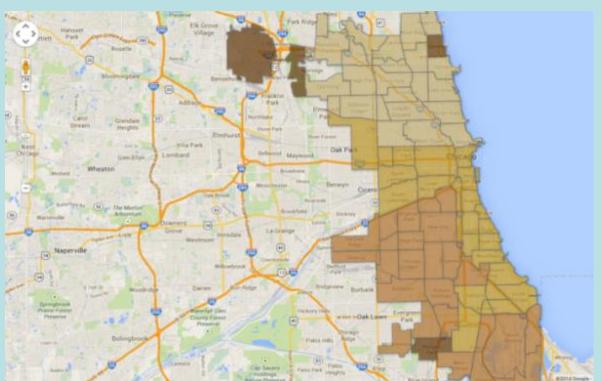


Converting Shape files to KML files:

http://www.mapsdata.co.uk/online-file-converter/#kml-instructions

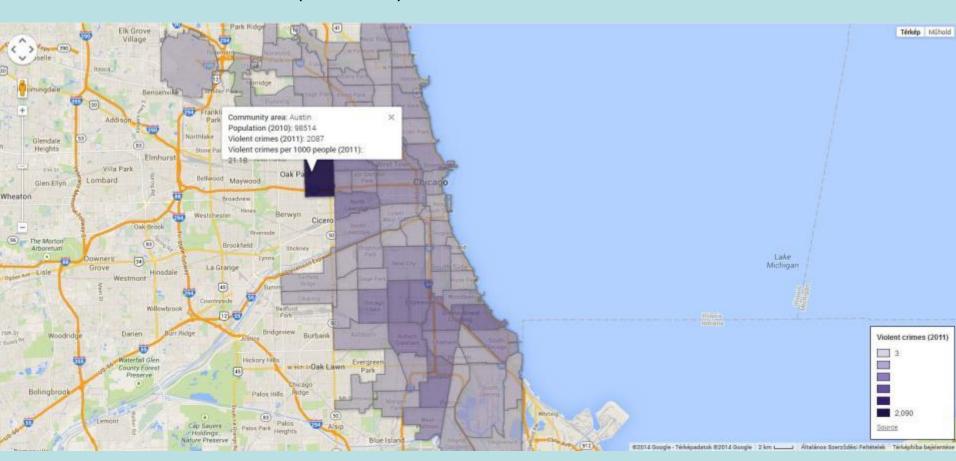
Data representation on maps:

- 2) If data table + poligon map are used:
- Choroplet map (intensity map in Google) that can be filled using two methods:
 - Buckets: The colors can be determined freely for each category (interval)



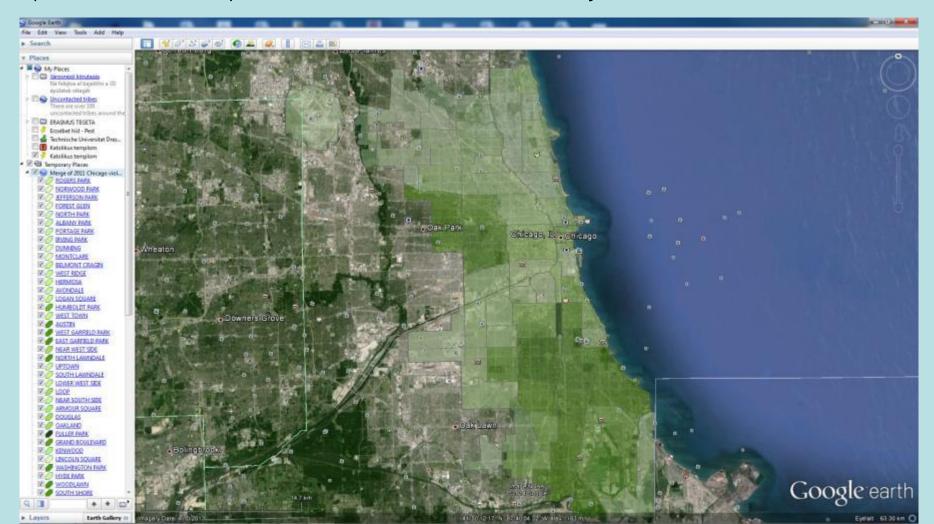
Data representation on maps:

- 2) If data table + poligon map are used:
- Gradient: Fills are determined by categories and placed to a continuous color scale (scheme)



Exporting the results:

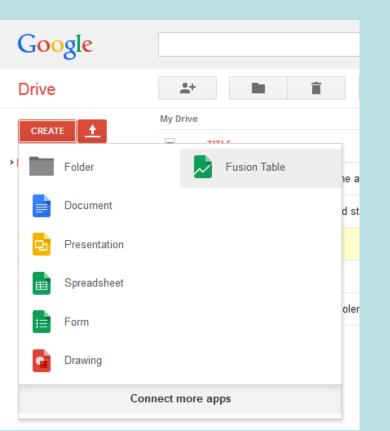
Any map can be exported to KML format to be visualized in Google Earth (File – Download) or as HTML to visualize it on your website

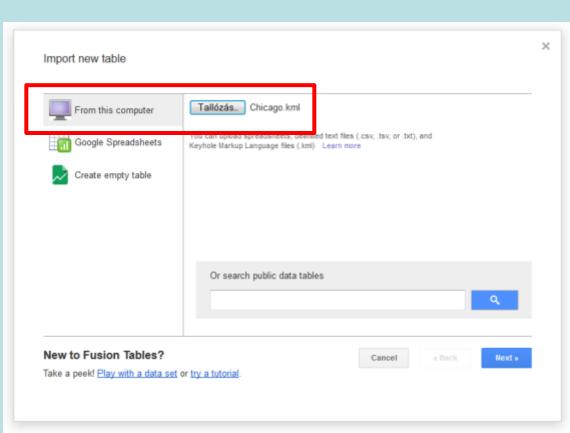


Making a map... step by step ©

How to import a map to Fusion Tables?

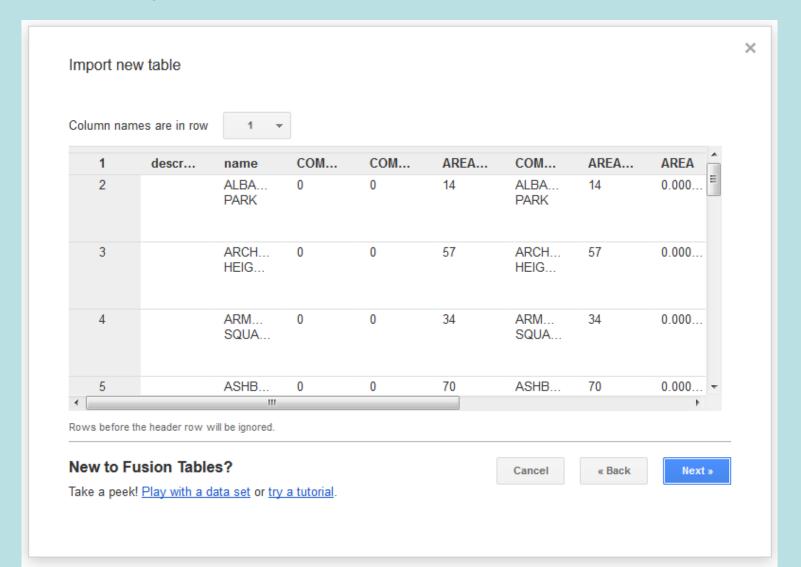
- Import: text files (e.g. csv), Excel tables (xls, xlsx) and Google Earth files (kml).
- Max. size of a file: 100 Mb





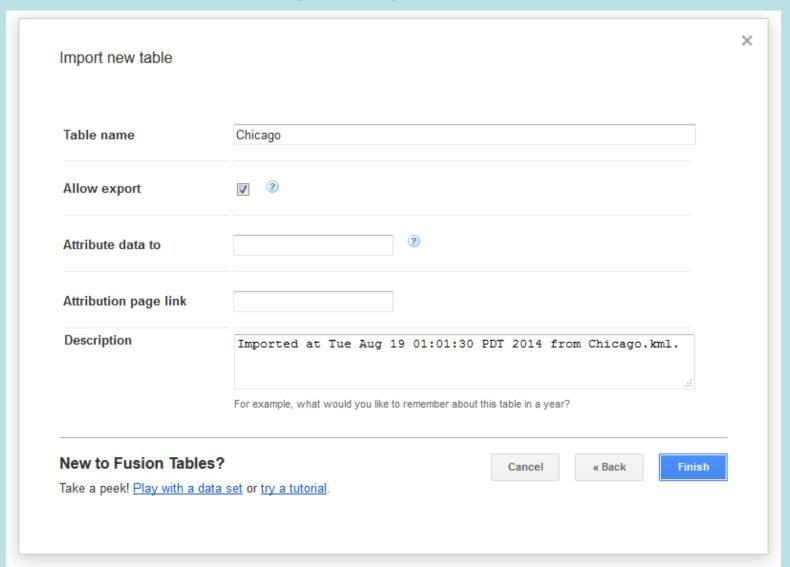
Making a map... step by step ☺

Giving in which row are placed the column names...



Making a map... step by step ☺

Typing some general data...



Making a map... step by step ☺

After importing a KML file we can visualize the data as a:

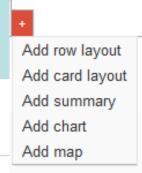
• Table (Rows)

Imported at Tue Aug 19 02:20:34 PDT 2014 from Chicago Kmil.

Chicago

Edited at 11:21 AM

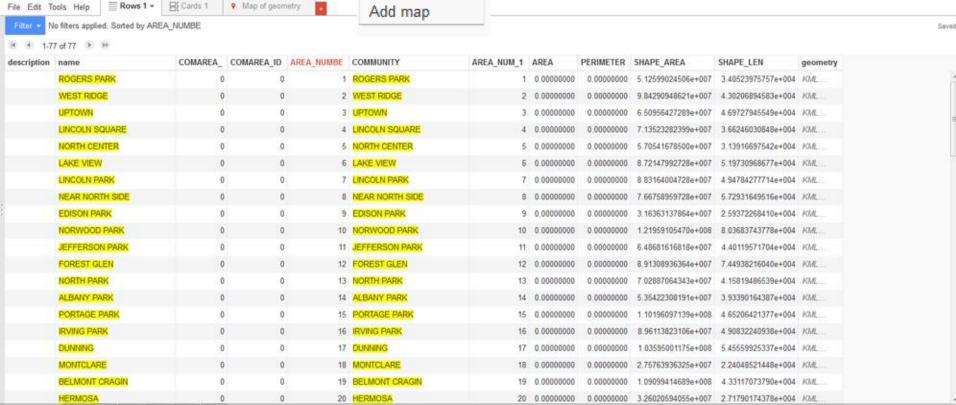
- Business card (Cards)
- Map (Map of geometry)



If we do not have thematic data in our table (only geometric data), we should import or join them...

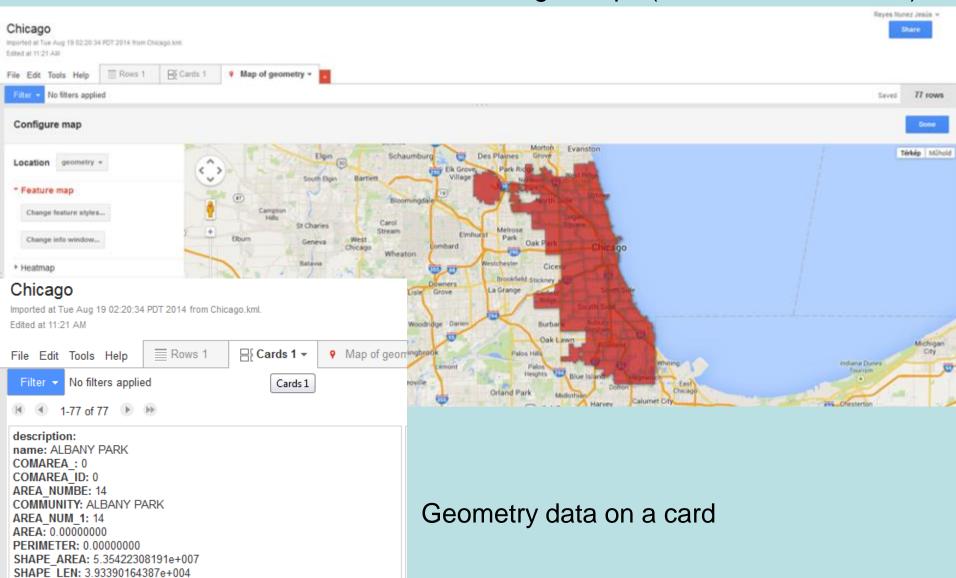
Reyes Nunez Jesus +

Share



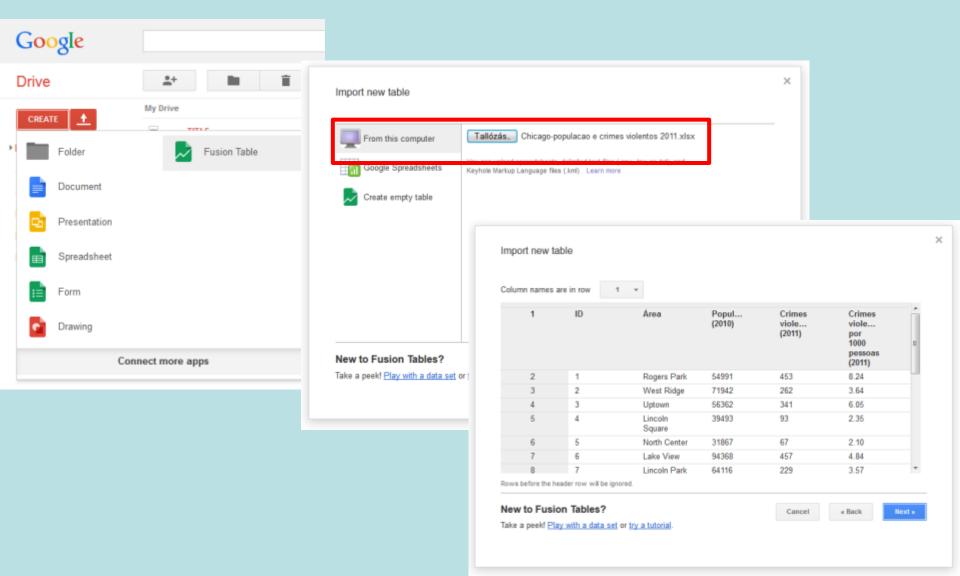
Making a map... step by step ☺

Visualization of a SHP or KML file on Google Maps (without thematic data)

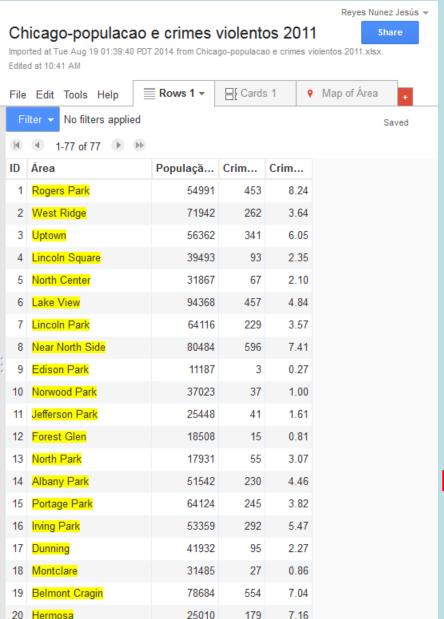


Making a map... step by step ©

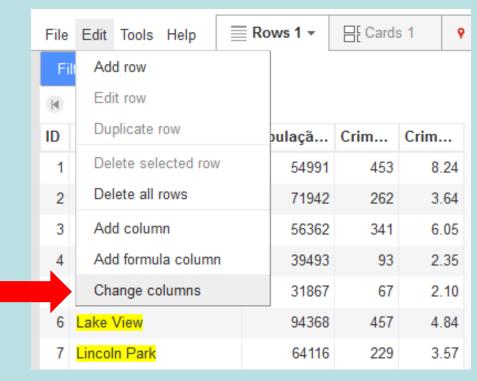
Importing thematic data using an Excel table...



Making a map... step by step ☺

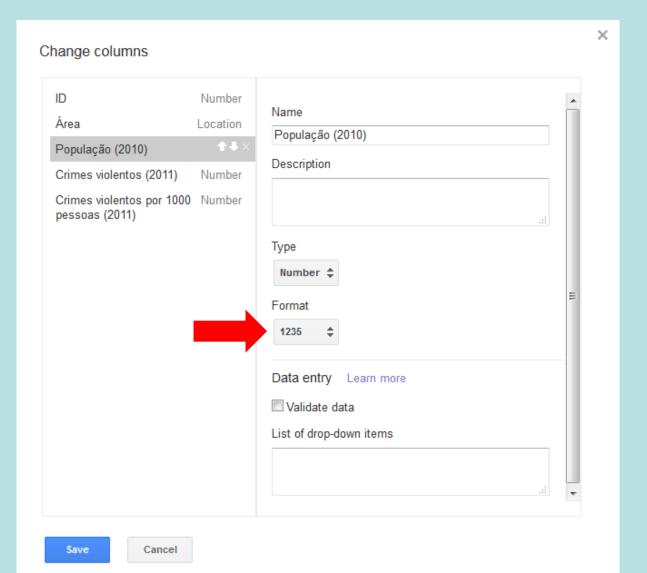


The native format (display) of our data can be changed:



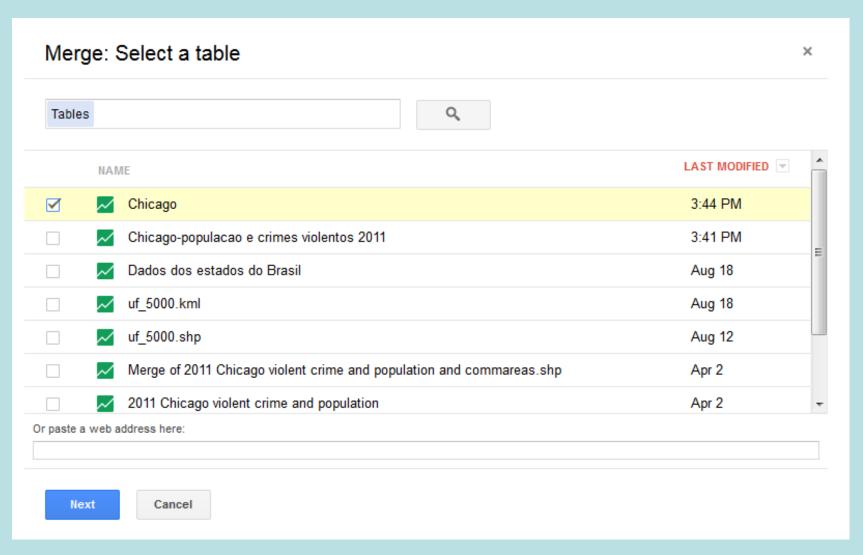
Making a map... step by step ☺

E.g.: Population is changed to Integer...



Making a map... step by step ©

Next step: Connecting thematic data to geometric data – File, Merge

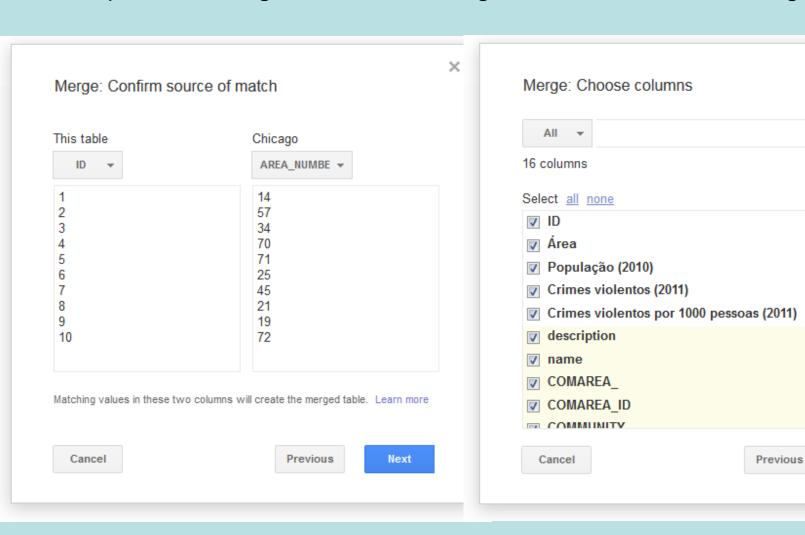


Making a map... step by step ☺

×

Merge

Next step: Connecting thematic data to geometric data – File, Merge



Making a map... step by step ☺

Next step: Connecting thematic data to geometric data – File, Merge

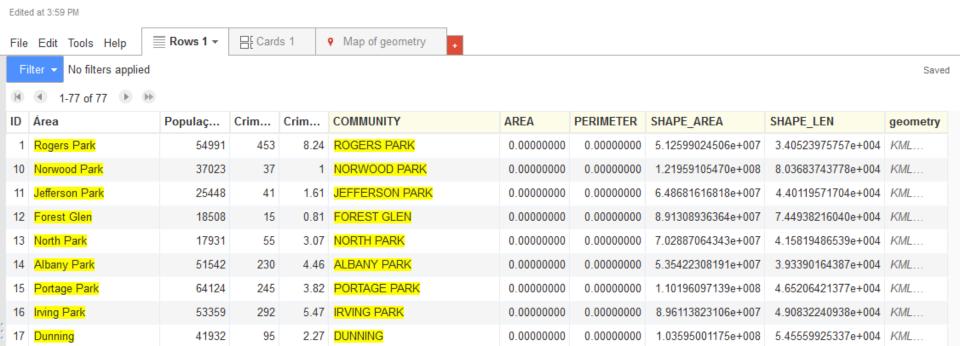


A new table is created

Reyes Nunez Jesús ▼

Share

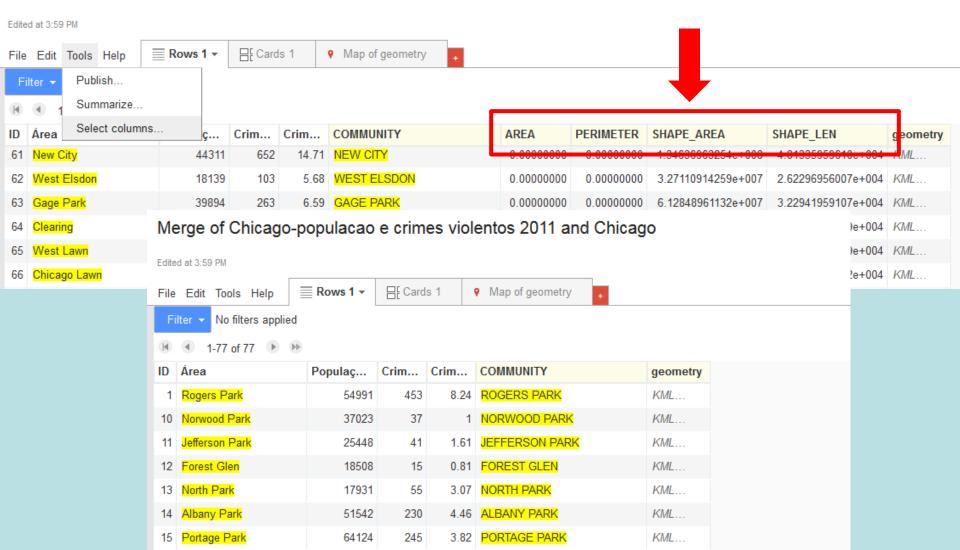
Merge of Chicago-população e crimes violentos 2011 and Chicago



Making a map... step by step ☺

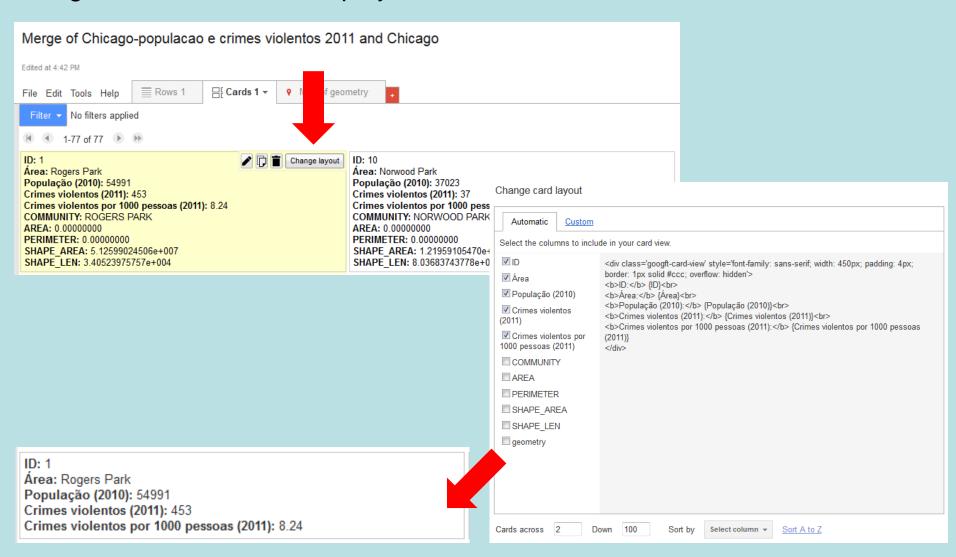
If we wish to display only some columns – *Tools, Select columns*

Merge of Chicago-população e crimes violentos 2011 and Chicago



Making a map... step by step ©

Giving which data will be displayed on a card— Tools, Select columns

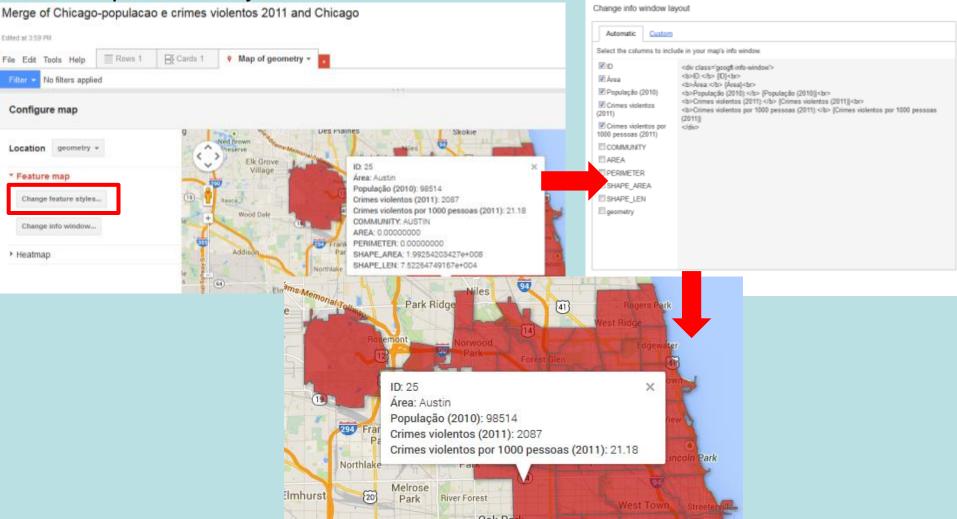


Making a map... step by step ☺

Visualizing our map – Map of geometry

If we want to change the info window - disadvantage: it should be changed in

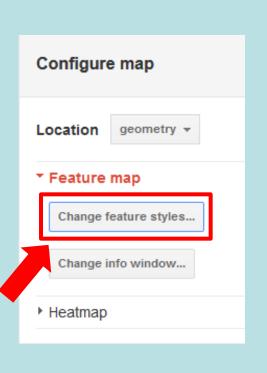
each map created by us

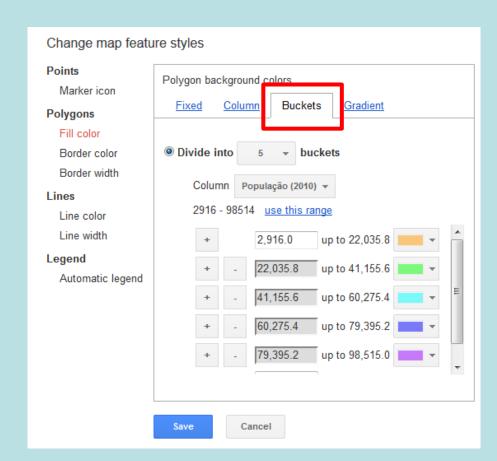


Making a map... step by step ©

Making thematic maps – Choroplet maps

- Buckets: Choose any color for each category
- Gradient: Use different tones of a color to represent the different categories



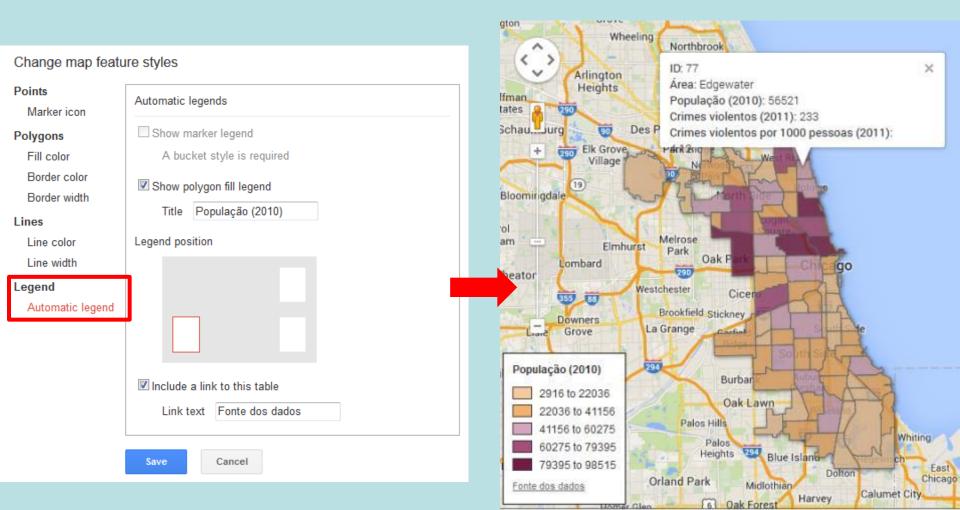




Making a map... step by step ☺

Making thematic maps – Choroplet maps

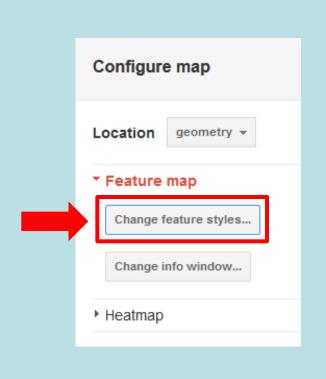
- Buckets: Choose any color for each category

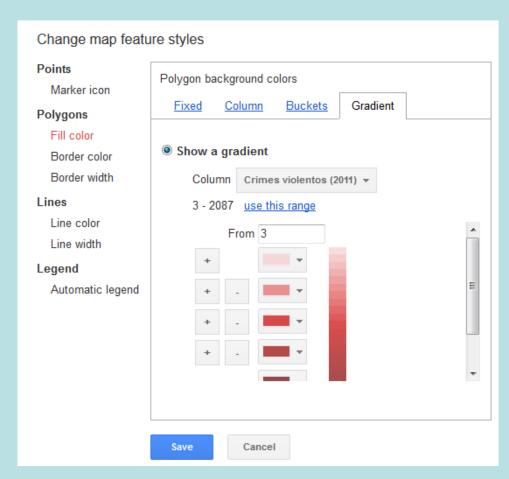


Making a map... step by step ☺

Making thematic maps – Choroplet maps

- Gradient: Use different tones of a color to represent the different categories

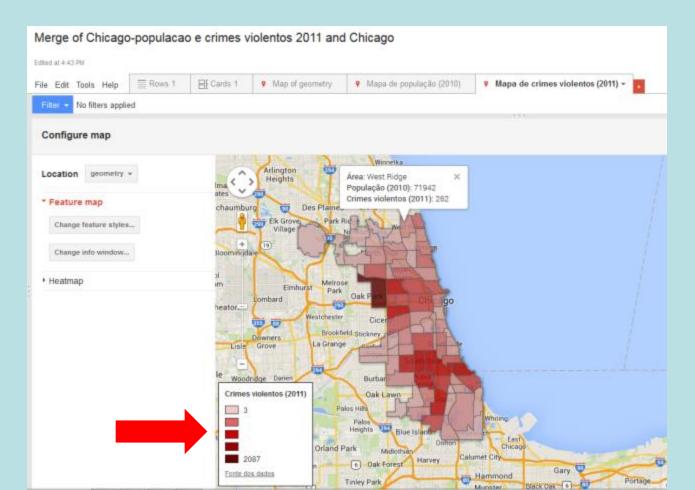




Making a map... step by step ☺

Making thematic maps – Choroplet maps

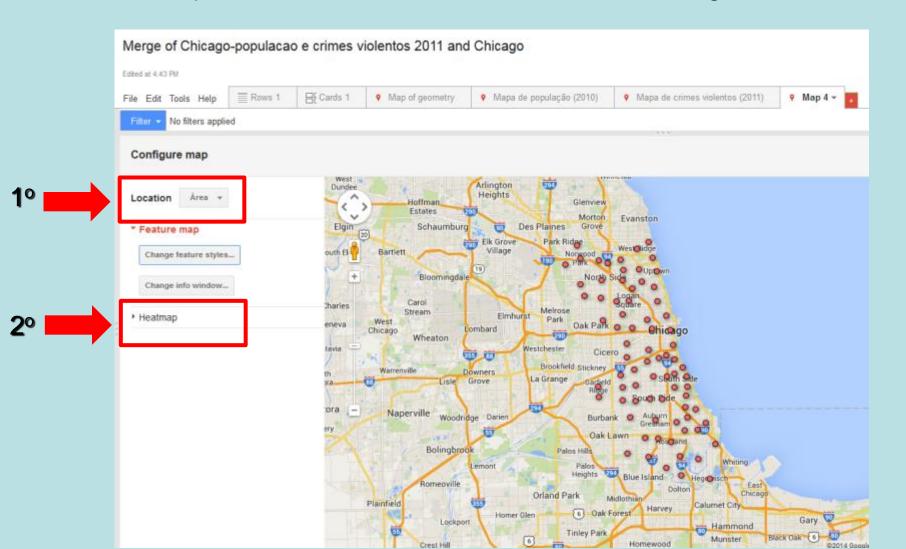
 Disadvantage: Intervals are not given in the legend, only the lowest and highest values



Making a map... step by step ☺

Making thematic maps – Heat map:

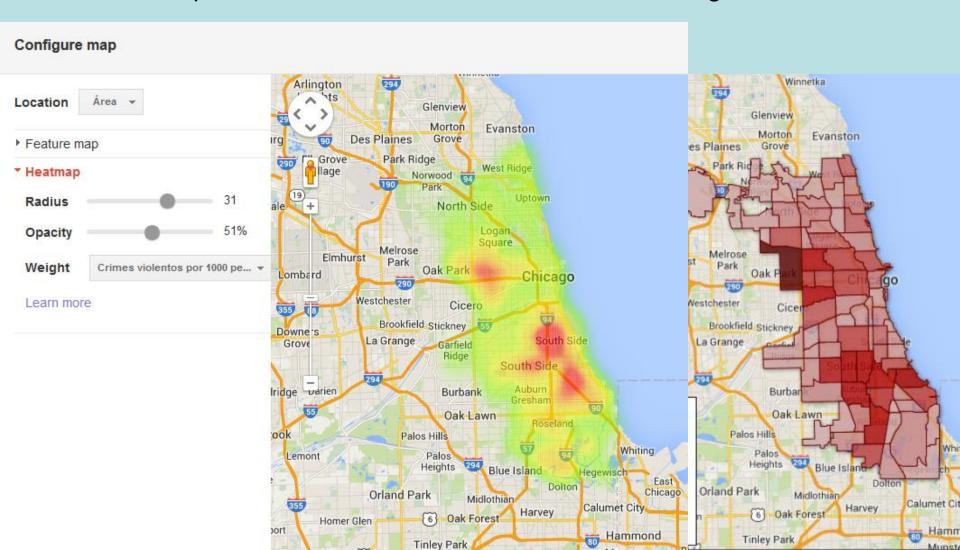
Point data is depicted as a continuous color transition from green to red



Making a map... step by step ☺

Making thematic maps – Heat map:

Point data is depicted as a continuous color transition from green to red



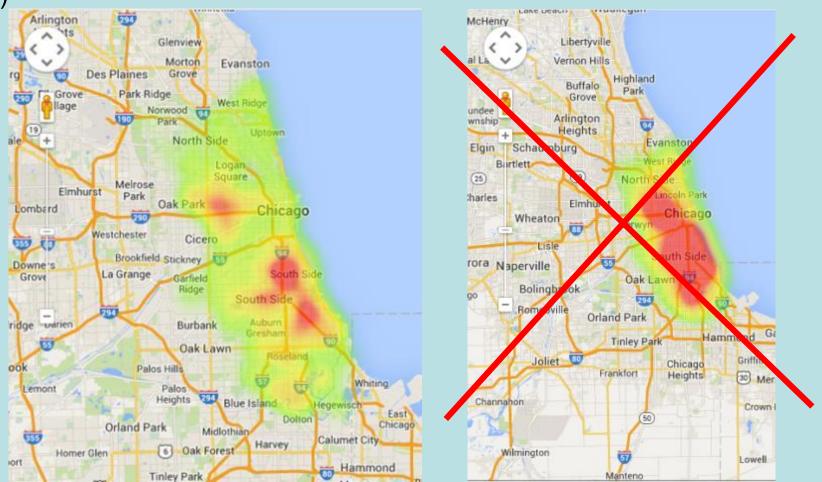
Making a map... step by step ☺

Making thematic maps – Heat map:

Point data is depicted as a continuous color transition from green to red

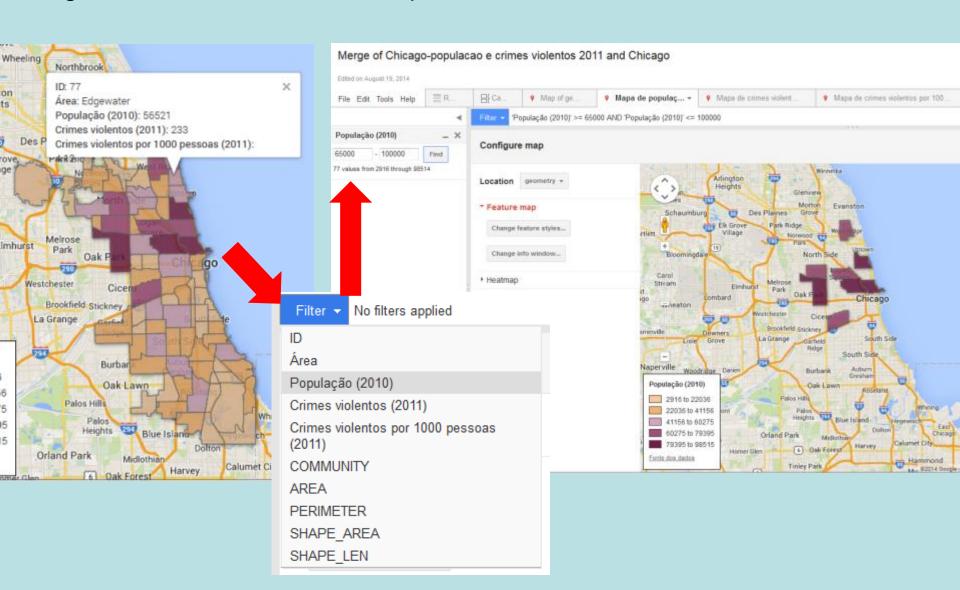
Disadvantage: the map can only be displayed correctly at the selected scale

(zoom)



Making a map... step by step ☺

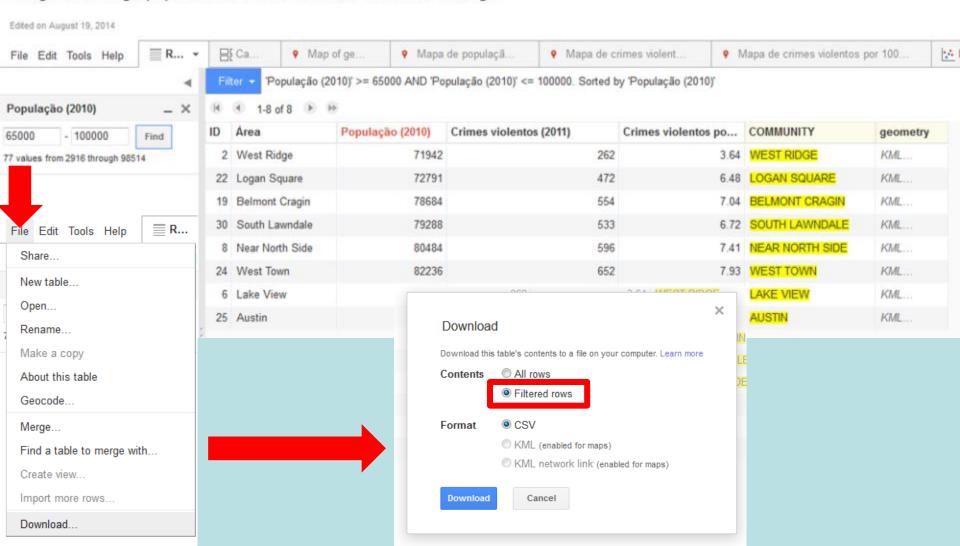
Using filters to select data in a map:



Making a map... step by step ☺

Using filters to select data in a table:

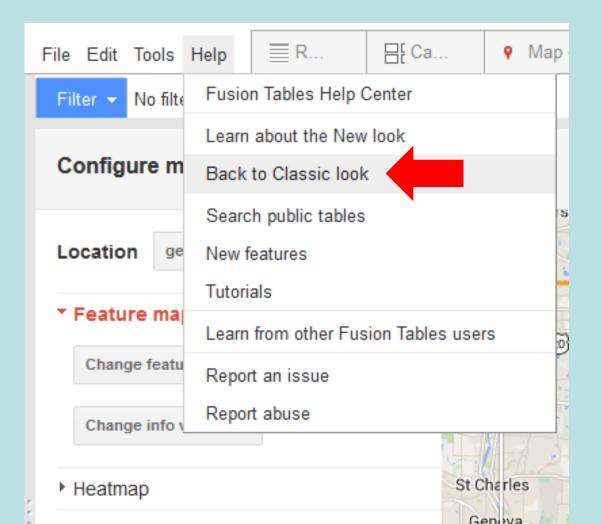
Merge of Chicago-população e crimes violentos 2011 and Chicago



Making a map... step by step ☺

Making bar charts connected to a map...

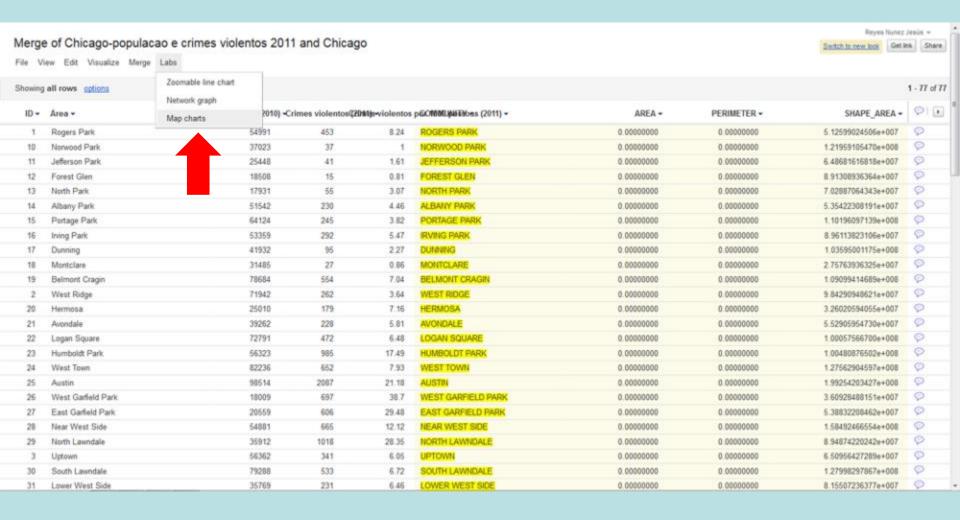
Condition: It can be made only in the Classic look



Making a map... step by step ©

Making bar charts connected to a map...

In the Classic look: Choose Map charts



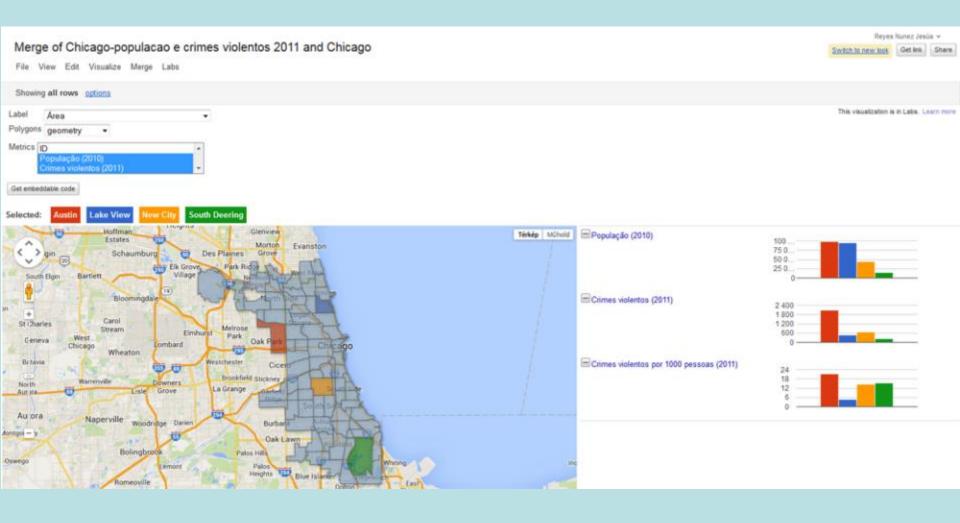
Making a map... step by step ☺

Making bar charts connected to a map...

Merge of Chicago-população e crimes violentos 2011 and Chicago Label: where is File View Edit Visualize Merge Labs the name of the Showing all rows options Polygons: areas Geometry Polygons Área Metrics: Metrics After it we can População (2010) Crimes violentos (2011) Values to choose max. 4 areas Get embeddable code represent on the map Select a region to view metrics. Click on a metric title to sort by that metric. Térkép Műhold Kalaallit North Pacific Ocean

Making a map... step by step ☺

Making bar charts connected to a map... Result:



Making a map... step by step ☺

Making bar charts connected to a map...
Publishing and sharing the results

