TRAINING MANUAL

USING *GOOGLE MAPS* WITH *OPEN BALTIMORE* DATA

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The purpose of this manual:

To provide step-by-step instructions to enable community members to use available 311, 911, and vacant property data for local map construction.

- **Part 1:** How to access, edit, and update 311/911 data and vacant property data from *Open Baltimore*. This website is run by Baltimore City and its affiliated partners to increase transparency and accountability. [Page 3]

- **Part 2:** How to use *Google Maps* with those datasets to create an individualized map for the community. [Page 13]

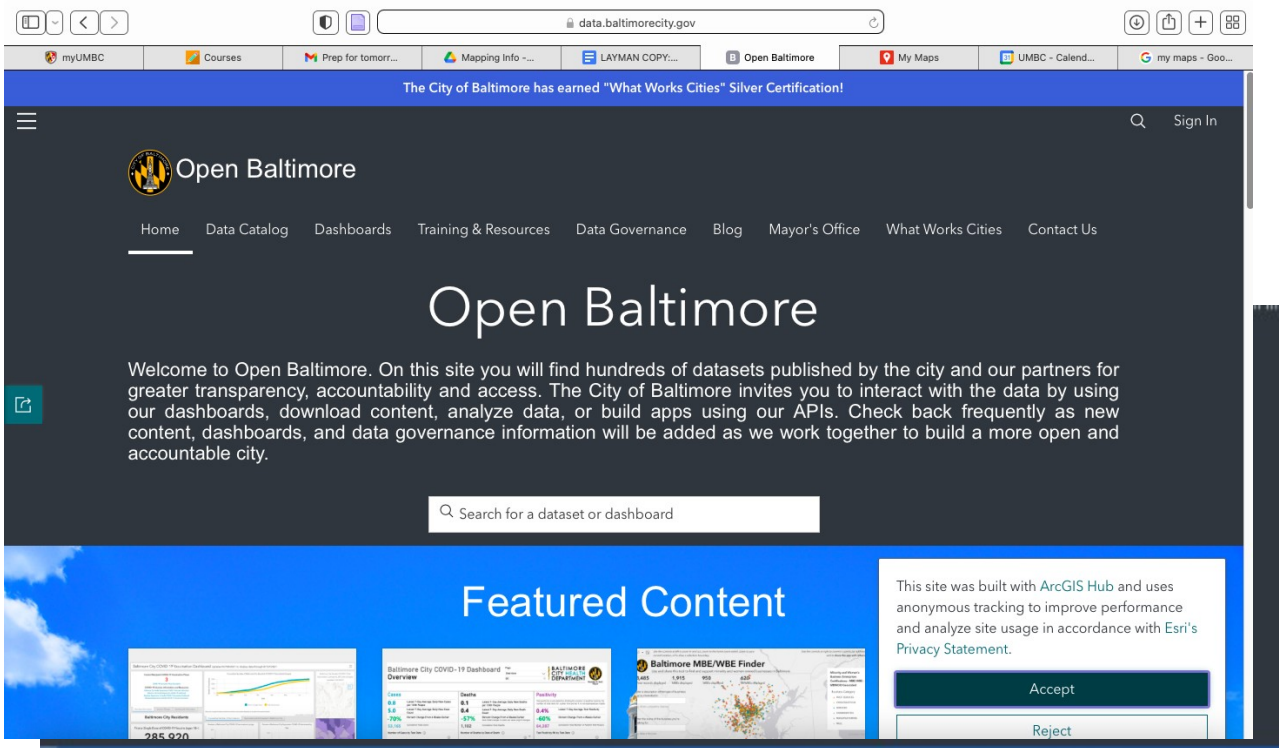
- **Part 3:** How to create a Heat Map to show hotspots. [Page 23]

Part 1

How to access, edit, and update 311/911 data and vacant property data from Open Baltimore

These instructions show step by step how to download *Open Baltimore's* Website and start using the 311 and 911 data.

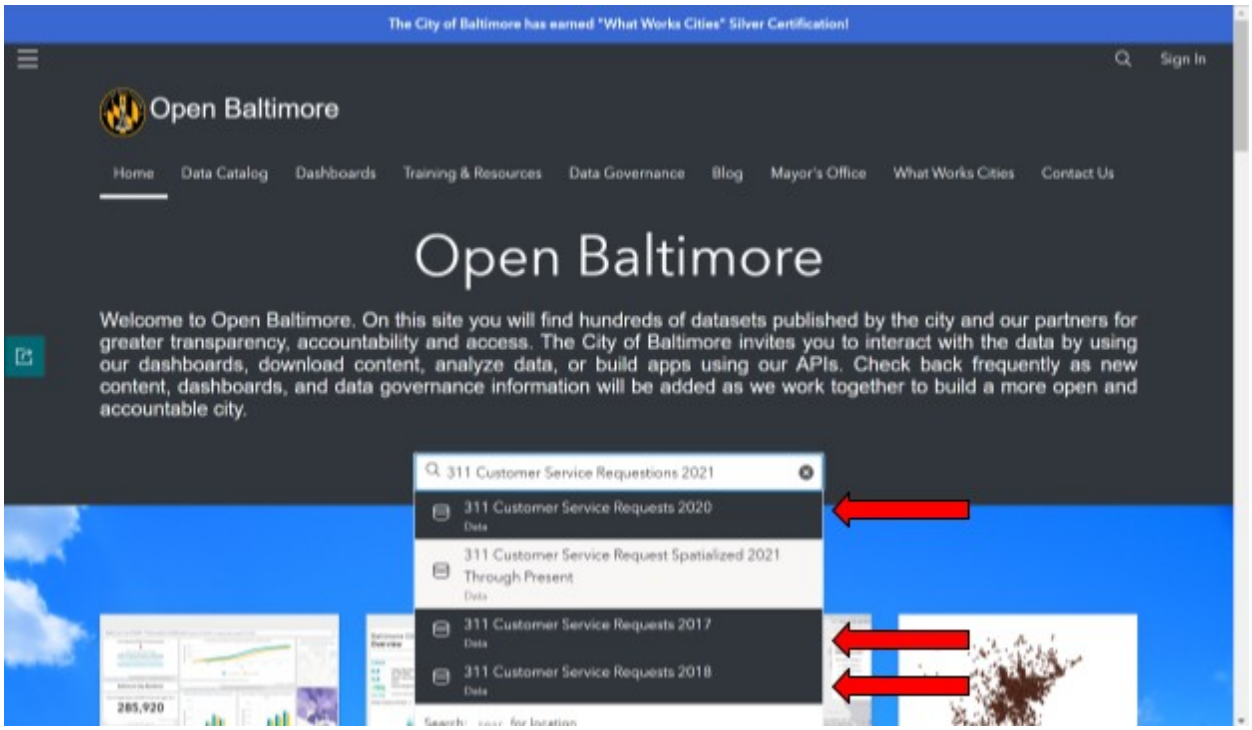
Step 1: Go to https://data.baltimorecity.gov. You should see this page below on your screen:



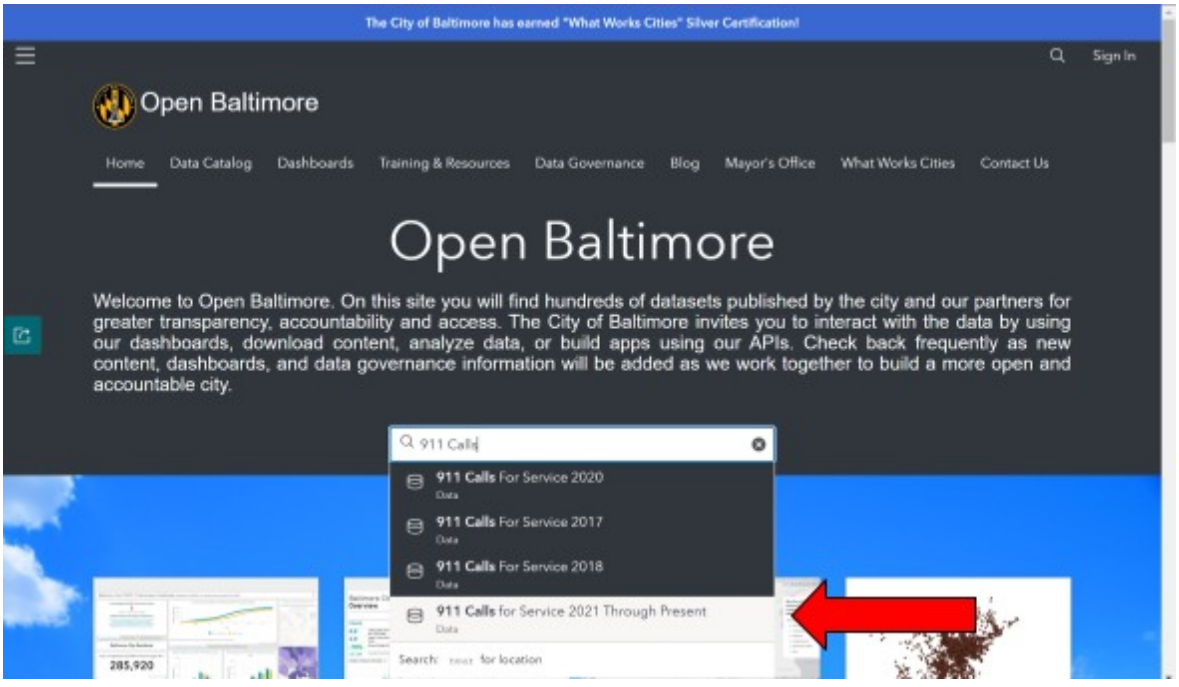
Step 2: You should now see *'Search for a dataset or dashboard'* bar on your screen (pointed to with **the red arrow**).

Step 3: Type in *"311 Customer Service Requests"* or *"911 Calls for Service"* the search bar to find the most recent data set, by year for 311 or 911 calls.

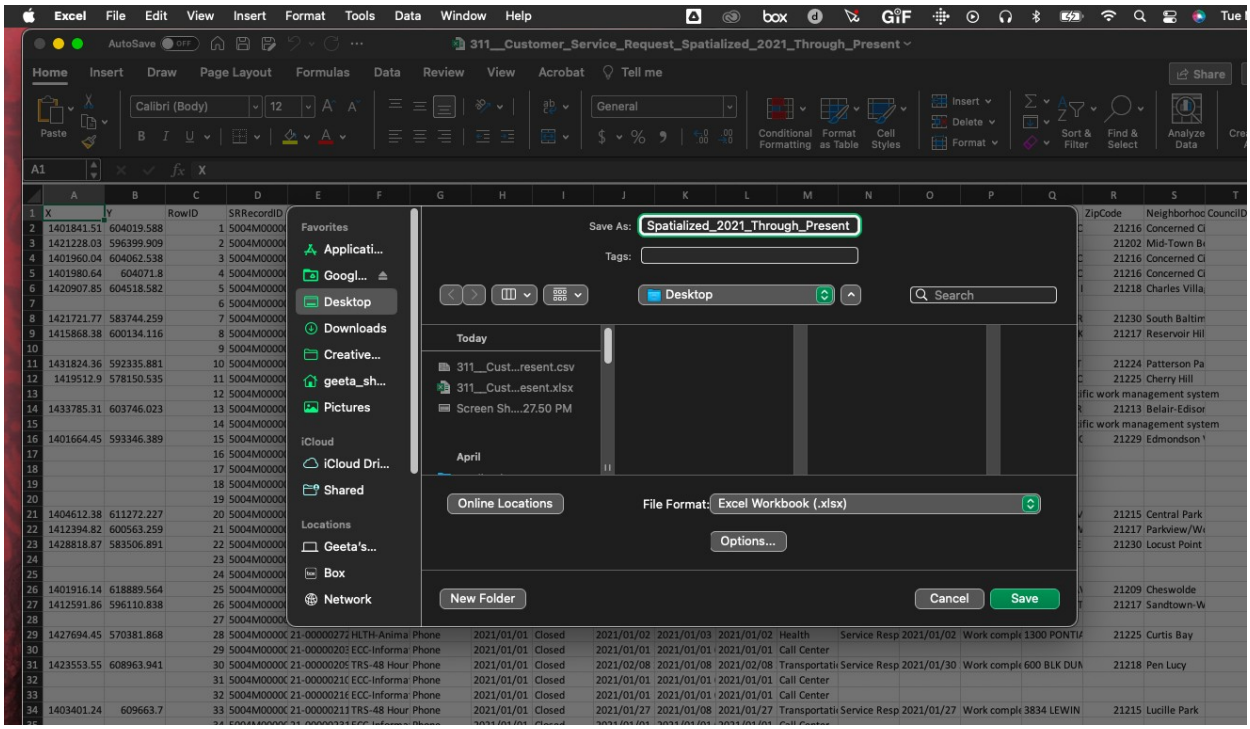
For 311 data:

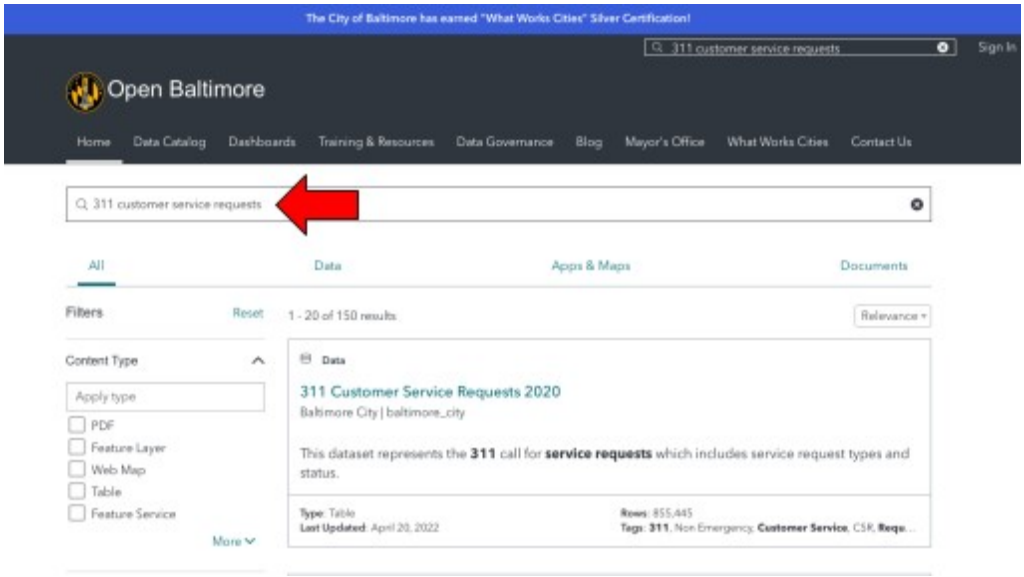


For 911 data:

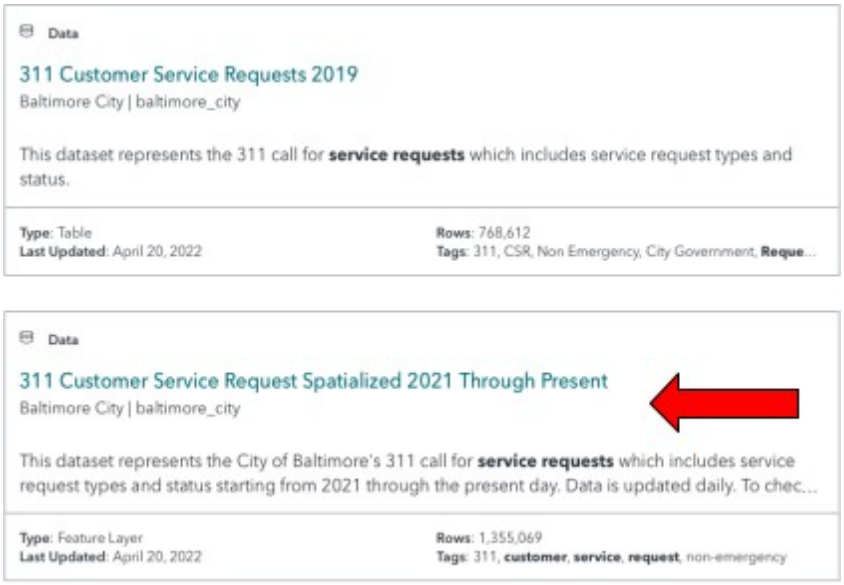


Step 4: Once you've entered the text into the search bar, click "enter" on your keyboard. This should look like the first screenshot with **the red arrow.**

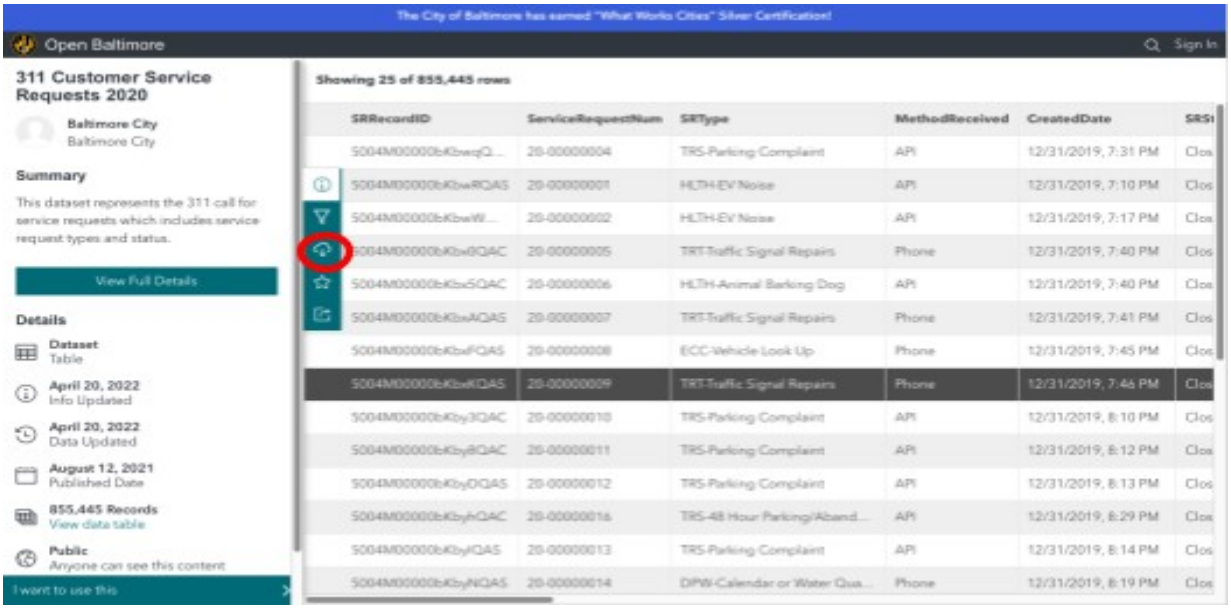




Step 5: Select the dataset you would like to download from the results list, and click on the blue text. An example is below with **the red arrow** showing where you should click.



You should now see a screen like the example below.



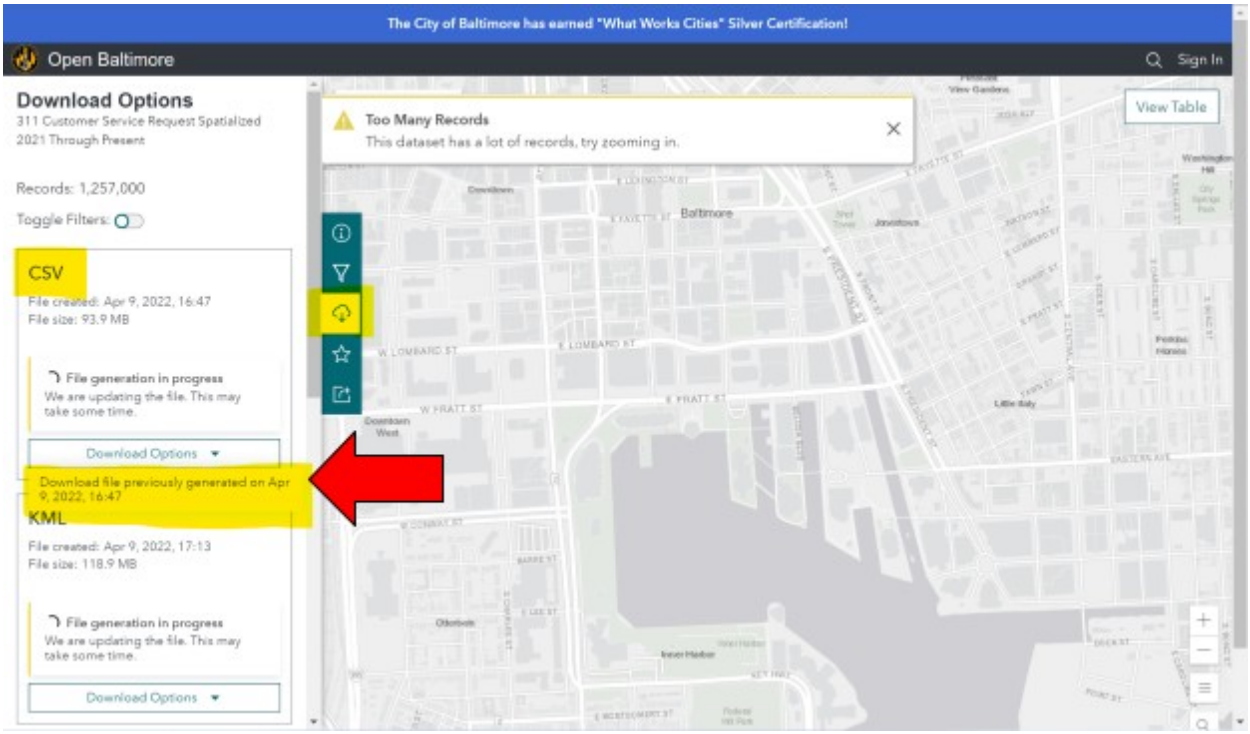
Step 6: Click on the download ( ) icon that is **circled in red** in the screenshot below.

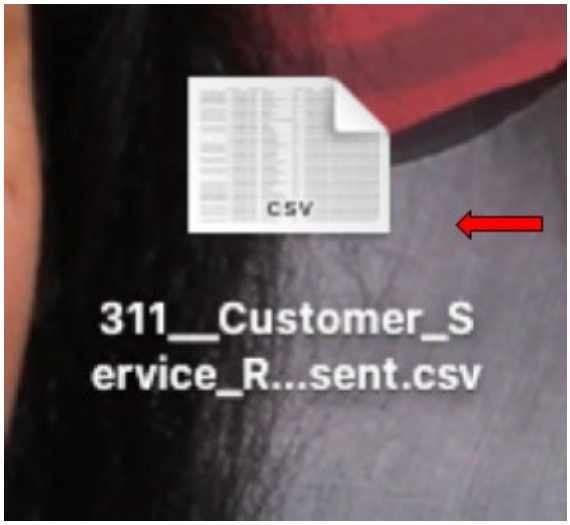
You should now see a screen like the example below, with a *'Download Options'* menu.

Download the .CSV file and drag that file onto your desktop.

- Under the CSV file, click on the *'Download Options'* dropdown menu.
- Then click on the *'Download file previously generated on [X date].'*

This lets you **download the .CSV file directly to your computer.** Make sure you drag that file onto your desktop like in the screenshot below.

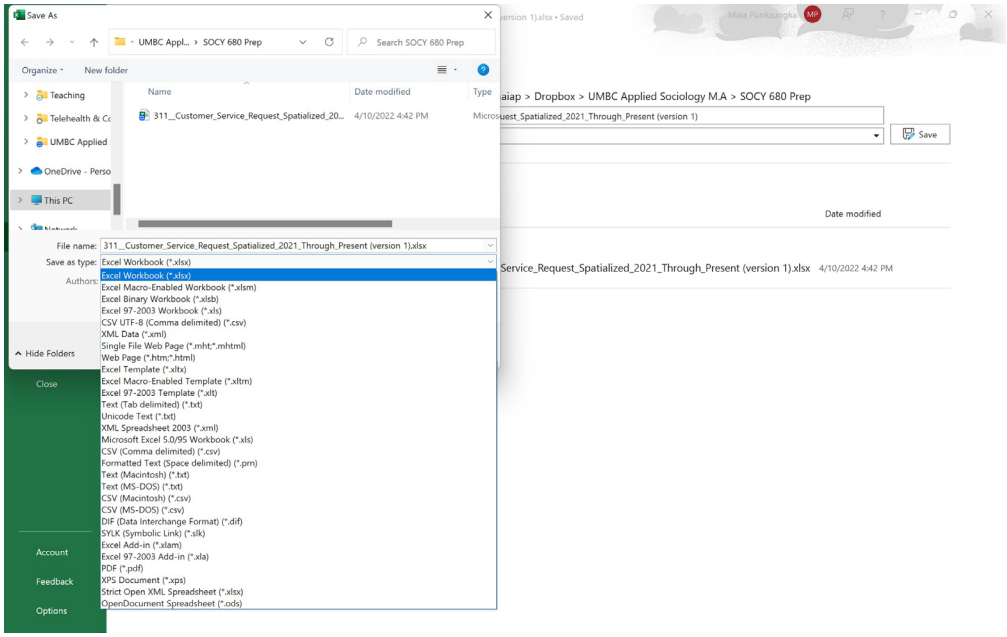


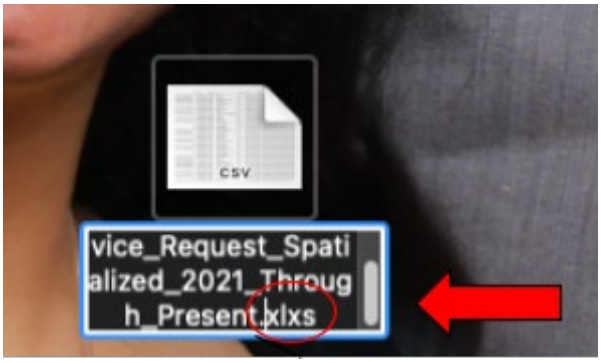


Step 7: After downloading the file, you must save this original file as an **Excel file (*.xlsx)**.

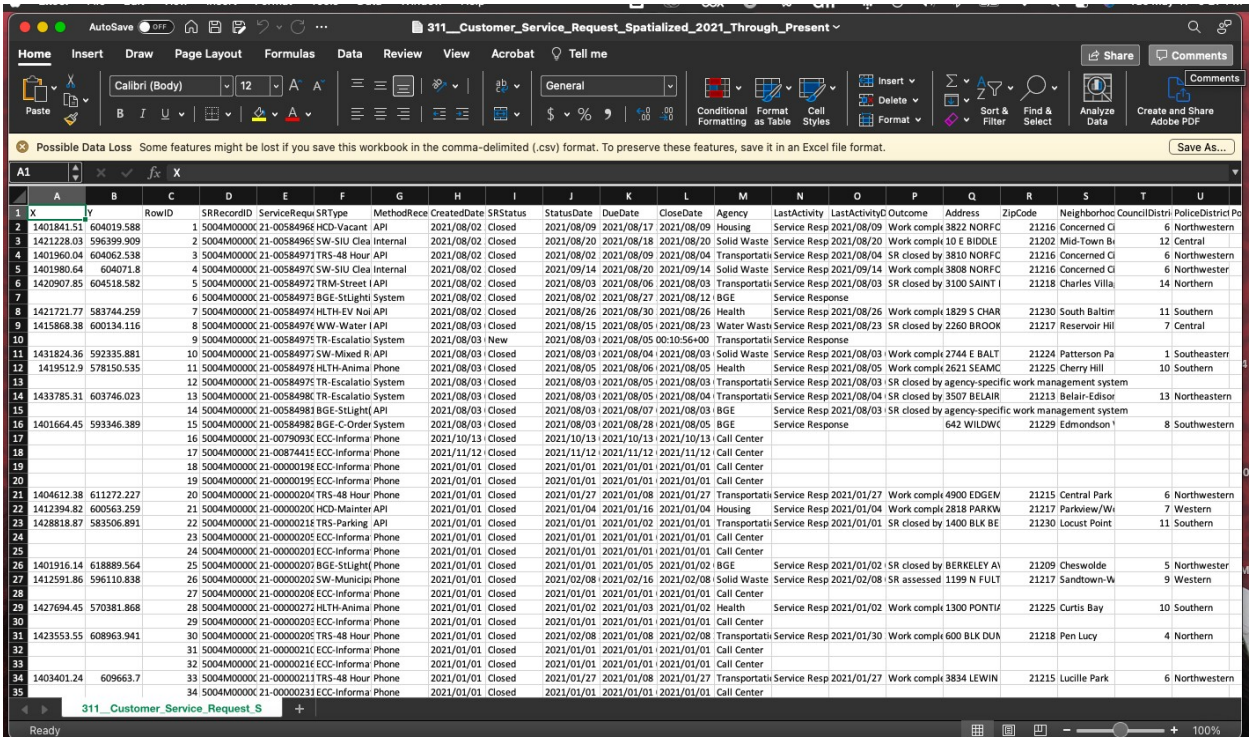
NOTE: If you end up saving the file as a .CSV file, you may lose a part of the original data.

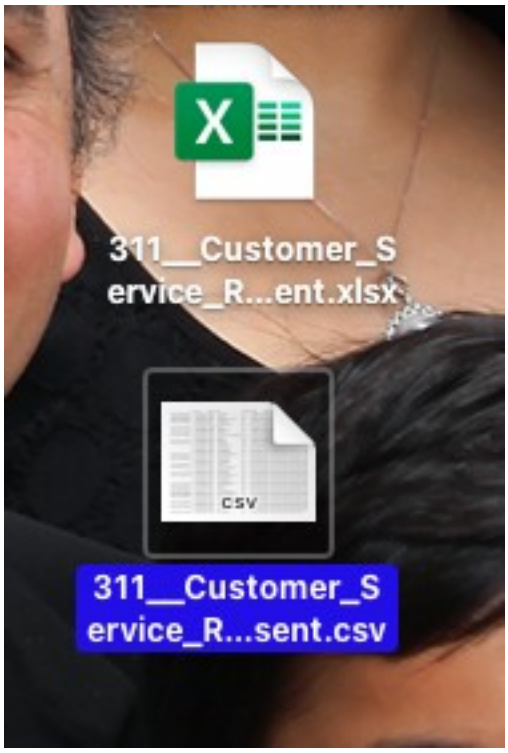
These steps are shown in the photos below.





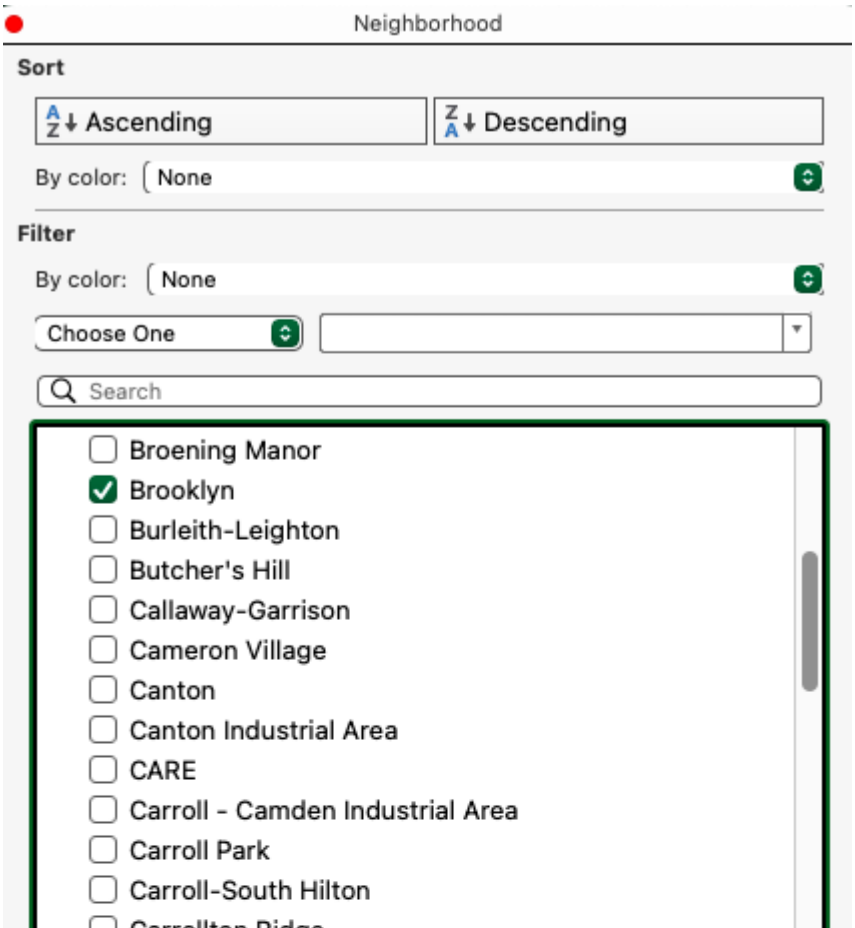
Step 8: Save this Excel file also under a **new file name** to prevent overriding any original data. In other words, you should have two of the same Excel files with different names – one will be saved as the original file and the other will be the **file containing the call data used for the data analysis**.

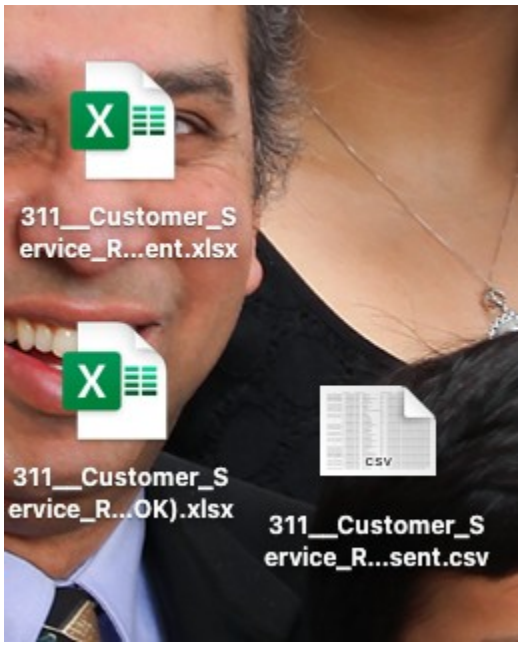




Step 9: Reduce the number of cases in this file by **filtering out the data** to only include the neighborhood of interest, for example Brooklyn.

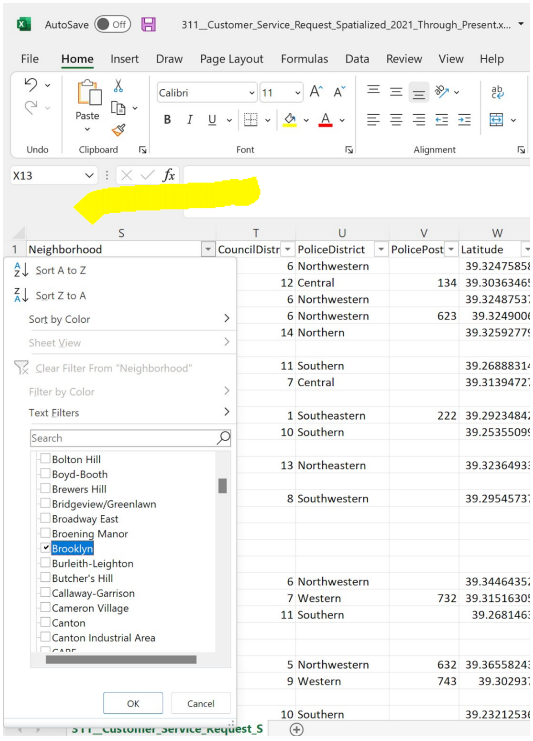
To do this, go to click Ctrl + Shift + L, and then filter the search by selecting your neighborhood of interest (e.g. Brooklyn) and deselecting all other neighborhoods-- as seen below in the picture.





Now save this third file to indicate that it only includes the neighborhood of interest; otherwise, the file will still include all other cases. This is your **working file--specifically for Baybrook data points.**

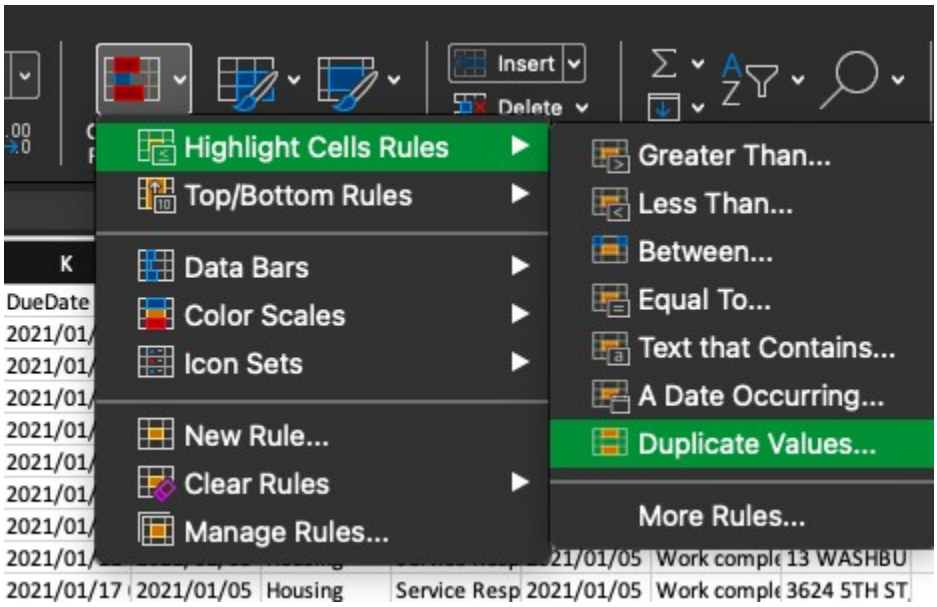
Note: Because the data file is huge with over 100,000+ cases, it is important to clean the data set by reducing the number of cases. Additionally, you may wish to delete any columns that are unnecessary for the data analysis.

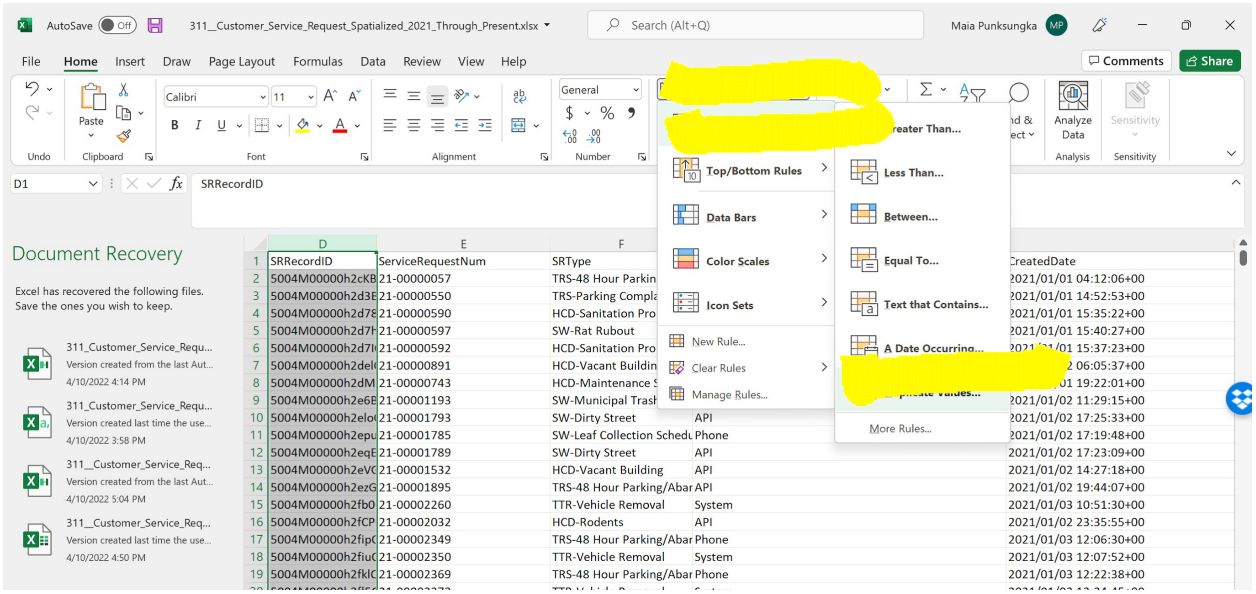


Step 10: Always do quality control by double-checking for any duplicates/cells.

To do this, highlight the ***'SRRecord ID'* column** (or any column you see necessary that could be an indicator of duplicates), click on the *'Conditional Formatting'* to display the dropdown menu, click on *'Highlight Cells Rules,'* and then click on *'Duplicate Values.'*

Duplicates/cells will appear **in red**. Delete any duplicates/cells as necessary. This is shown with both Mac and Windows software.



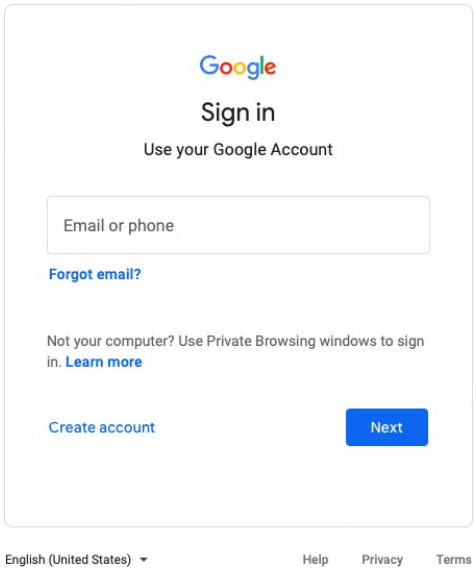


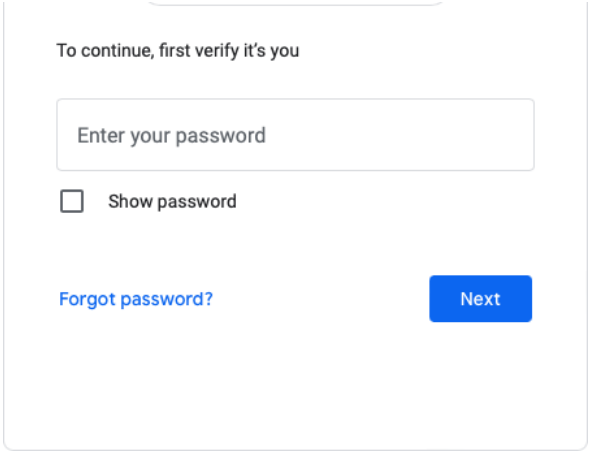
Part 2

How to Use *Open Baltimore*'s 311/911 Data to Create a Google Map

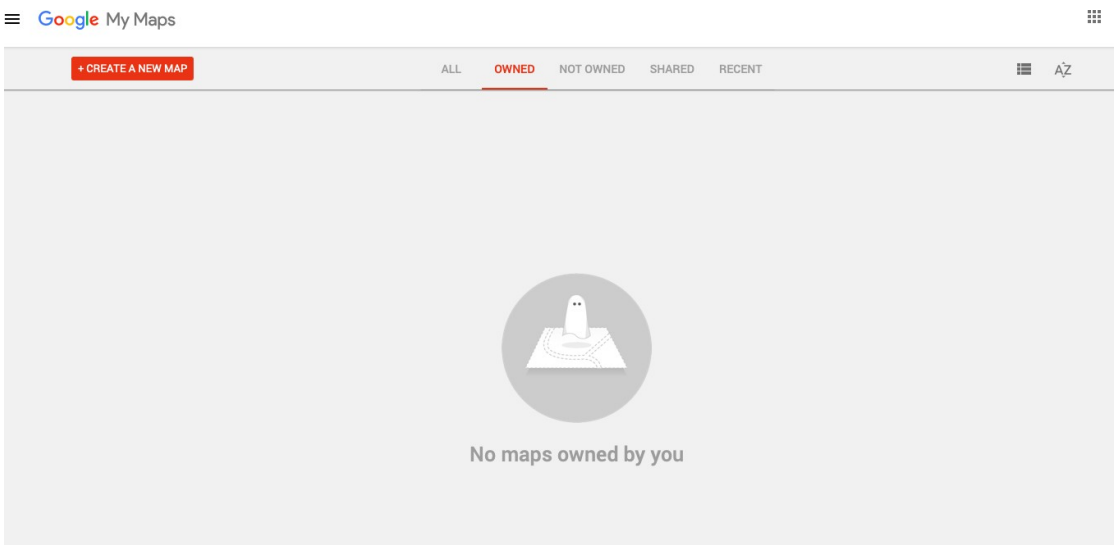
Follow these instructions, step by step, to create a Google Map using 311/911 data.

Step 1: Login to your Google account by entering a Google email account and its password.

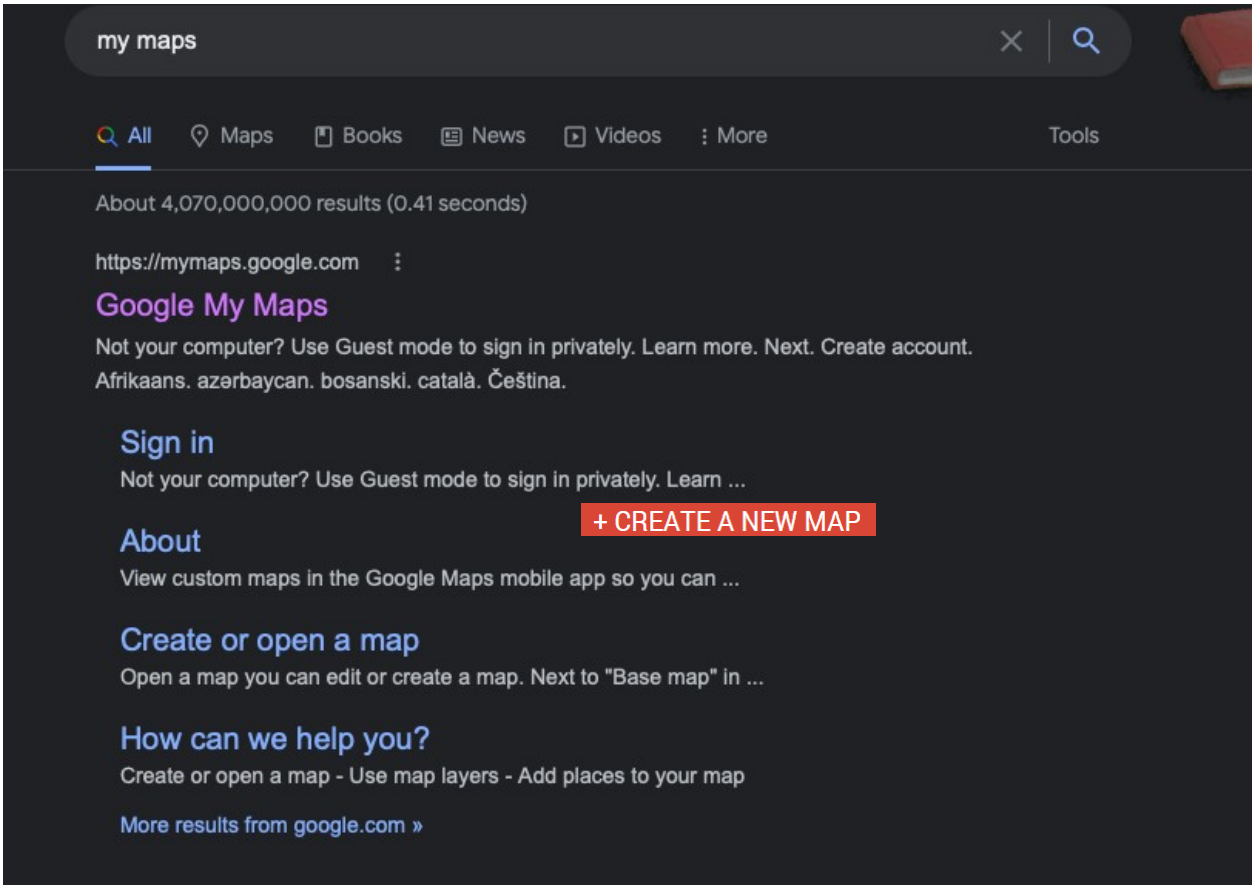




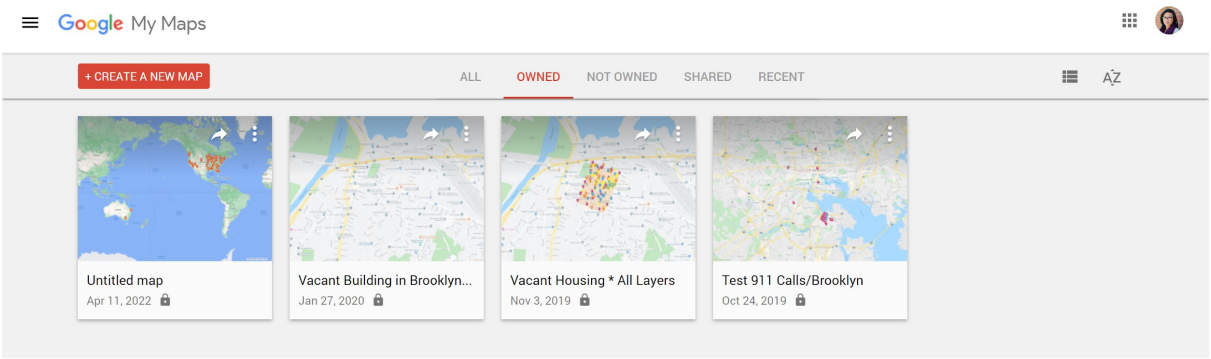
Step 2: Click on this link: https://www.google.com/maps/d/. You should see something similar to the screenshot below on your screen.



If that doesn't work, search for *'Google Map GIS'* or *'My Maps'* on Google, as shown below.



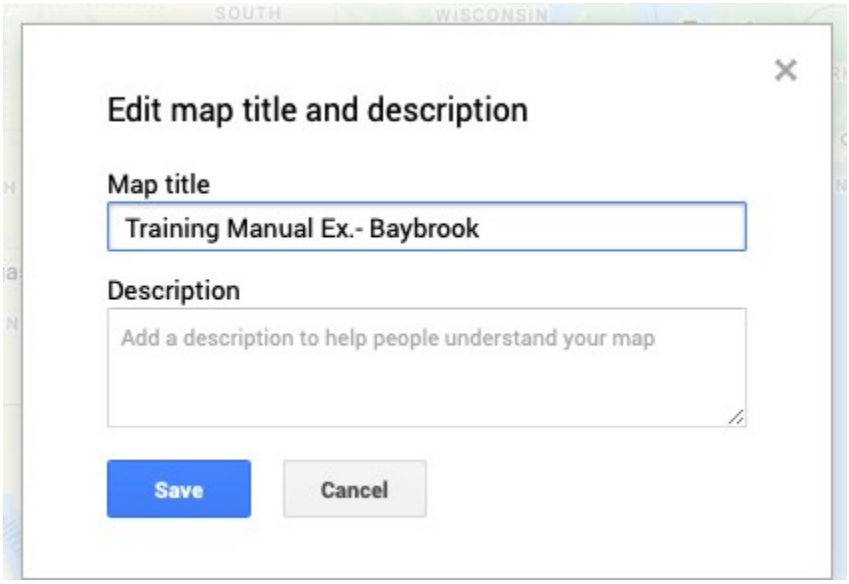
Step 2: Click on the *'+ Create A New* + CREATE A NEW MAP *Map'* (as seen here) button to create a new map.

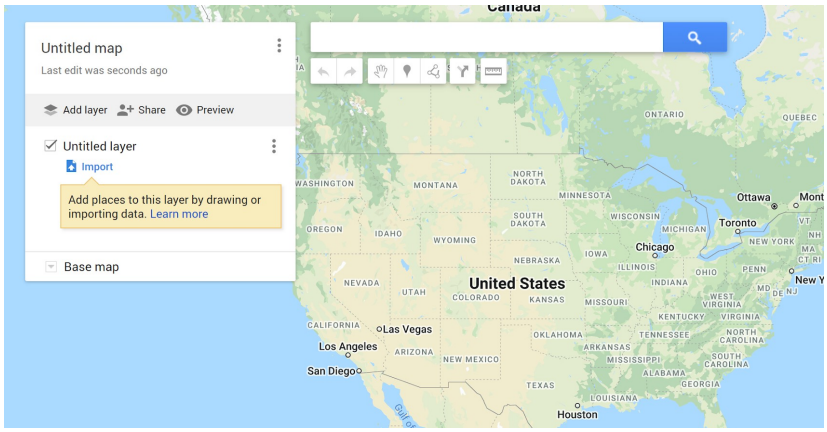


Step 3: The following screen will appear. Be sure to name your map by clicking on the *'Untitled map'* title, and then typing in your own title.

To upload your data, click on *'Add layer'* Add layer > *'Import'* Import

Note: A layer refers to the data set you wish you view on the map. Your data set should include the geographical location of each point you want to display on your layer. Google Map recognizes both numeric and string variables. However, it is more useful to have your geographical location displayed in numeric forms (e.g., longitudinal and latitudinal coordinates). Occasionally, string forms can result in your data point to be outside of your neighborhood of interest.



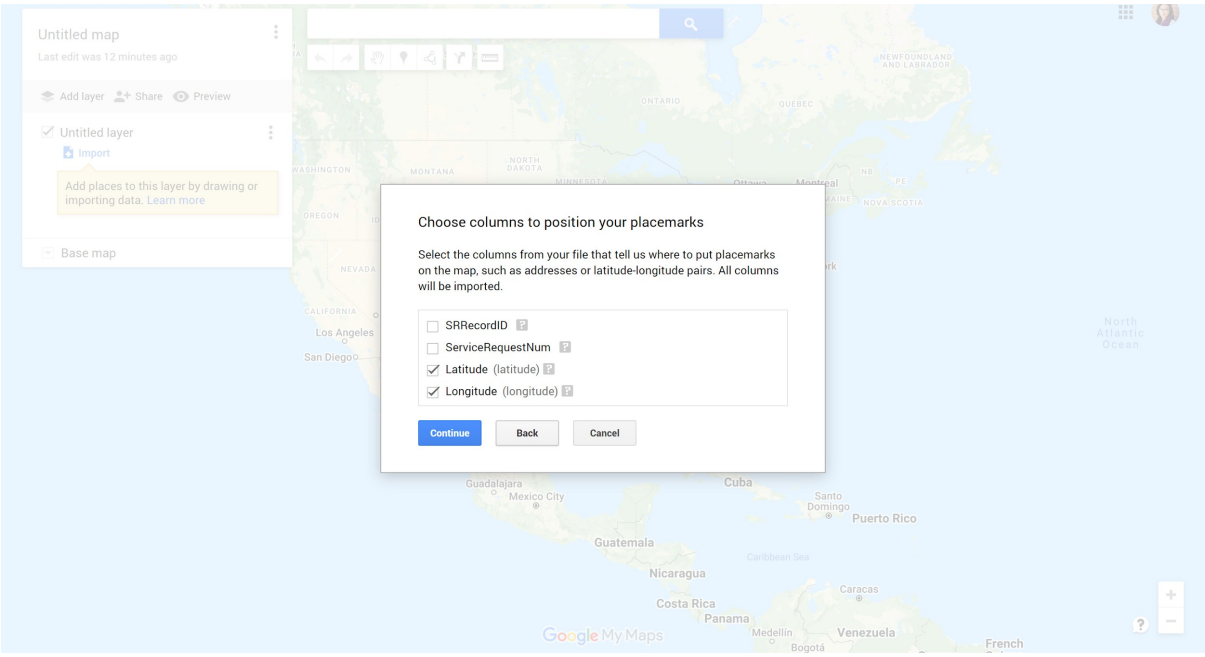


Step 4: During the data importing process, the following screen will appear: *'Choose columns to position your placements.'*

Depending on your data file, select the column with the location variables you would like to use. If you are using latitude-longitude data, you must select both these columns because they are pairs.

Note: The 311 data uses latitude-longitude pairs, whereas the 911 data uses the street name and block number to mark the location for confidentiality reasons.

Pro tip: Translate the street name and block numbers into latitude-longitude pairs by doing a Google search. This should be done during the quality check process prior to data analysis.

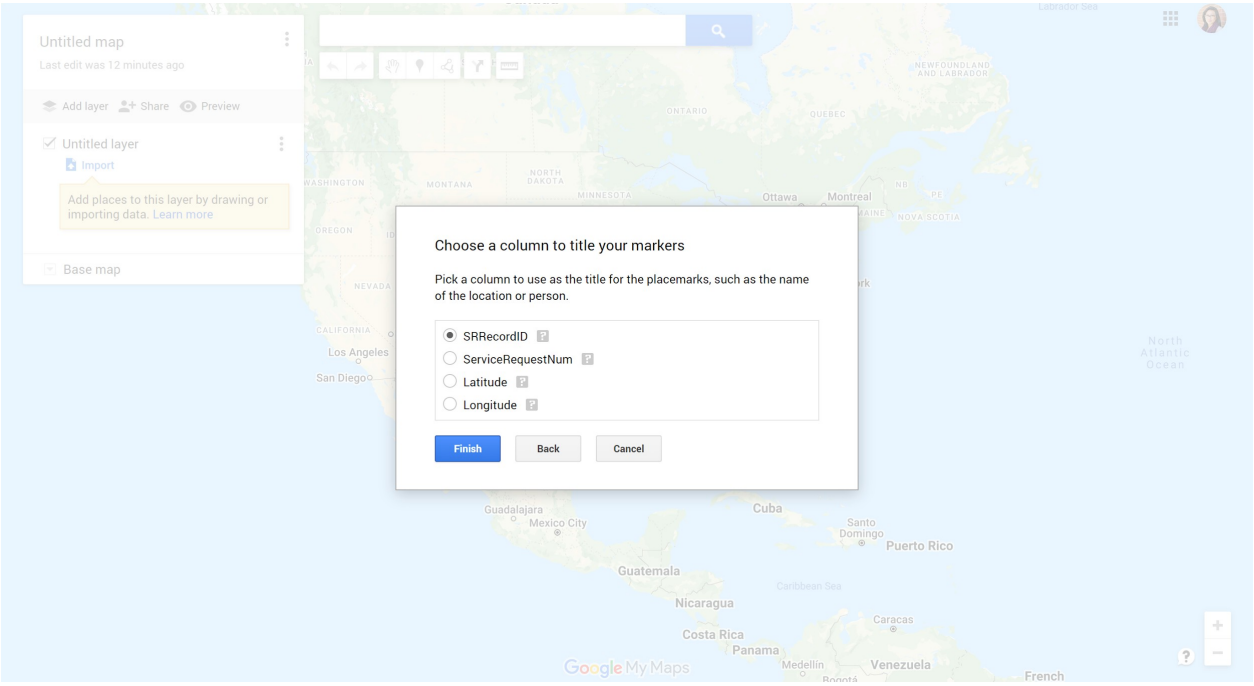


Step 5: During the data importing process, the following screen will appear: *'Choose a column to title your markers.'*

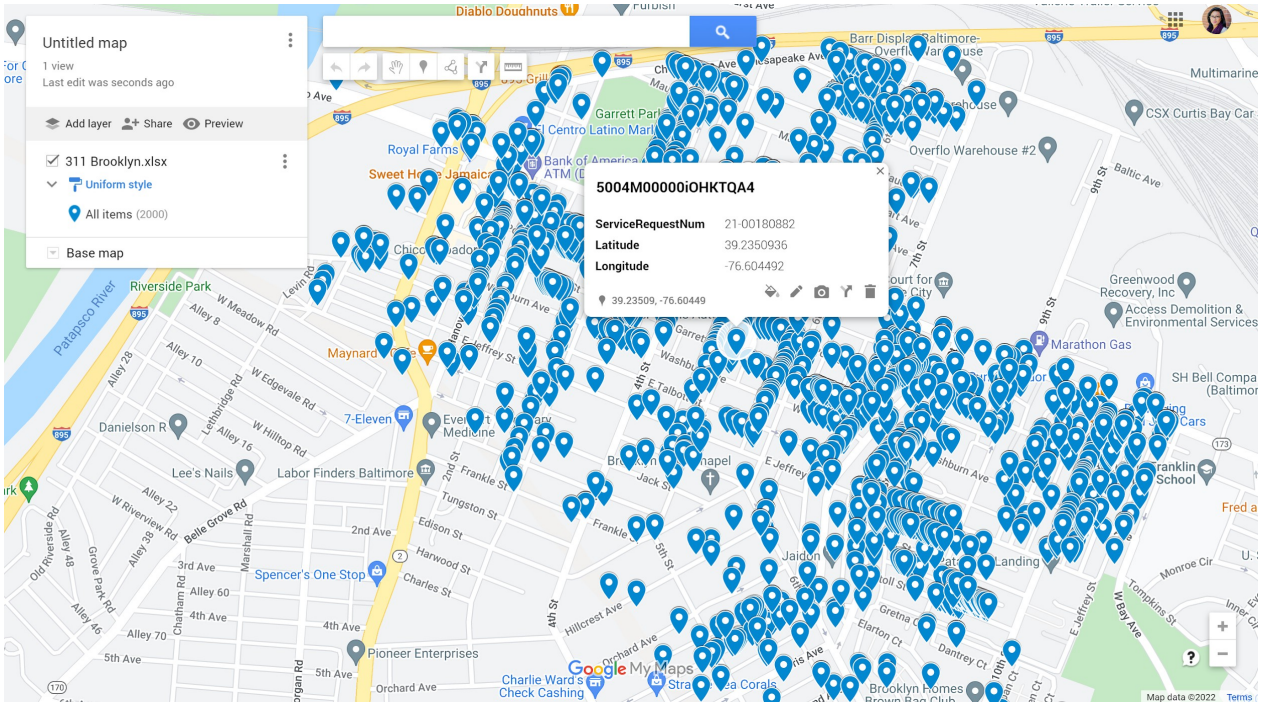
Depending on the data, you can use the record ID number to label each point.

Note: Prior to uploading the data into Google Map, it is important to clean the data and label each row based on any important markers.

For example, you may wish to label the coordinates for all house fires, burglary, escorts, overdose, etc.



Step 6: The following map will appear. To add additional layers, repeat steps 1-5.


Untitled map
1 view
Last edit was seconds ago
Add layer
Share
Preview
311 Brooklyn.xlsx
Uniform style
All items (2000)
Base map
5004M00000iOHKTQA4
ServiceRequestNum 21-00180882
Latitude 39.2350936
Longitude -76.604492
39.23509, -76.60449
Diablo Doughnuts
Royal Farms
Riverside Park
Patapsco River
Maynard
7-Eleven
Danielson R
Lee's Nails
Labor Finders Baltimore
Spencer's One Stop
Pioneer Enterprises
Charlie Ward's Check Cashing
Overflo Warehouse #2
CSX Curtis Bay Car
Marathon Gas
Greenwood Recovery, Inc
Access Demolition & Environmental Services
Franklin School
Google My Maps
Map data ©2022
Terms

Part 3

How to create a Heat Map to show hotspots

Follow these instructions, step by step, to create a heat map to show hotspots from the data.

1. Go to a map tab, or use [+] Add map to add one.

2. If, for some reason, the map configuration panel isn't showing, click on the Tools > Change map section.

3. Click on the “Heatmap item” to the left of the map

Turns a map like this …

Figure 4. Map of Vacant Properties in Study Area

into a map like this….

Figure 5. Map of Vacant Properties with 311 Calls

NOTES