Lab 2: Downloading American Community Survey Data

Learning objectives
- To become familiar with data published by the US Census Bureau.
- To practice using the sources that you need in order to obtain this data.
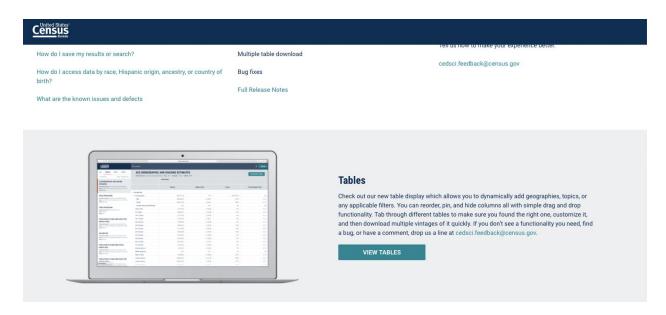- To gain the skills to jump into Assignment 1!

Find your census tract (before lab, if possible)
- Go to US boundary (http://www.usboundary.com/Areas/Census Tract/California/ Alameda County). This website is handy for identifying the geography of your census tract. This is a really good idea if you want to use this lab to get started on Assignment 1. To explore this site, click on "Data on map."
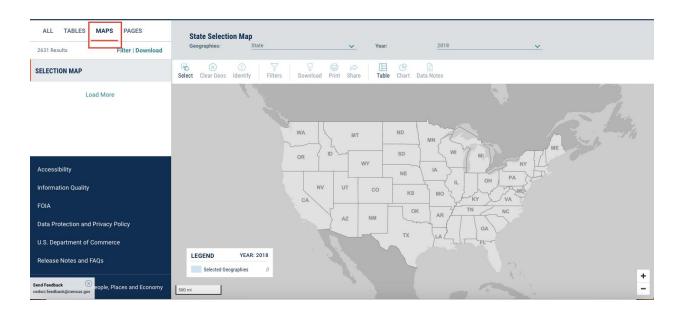
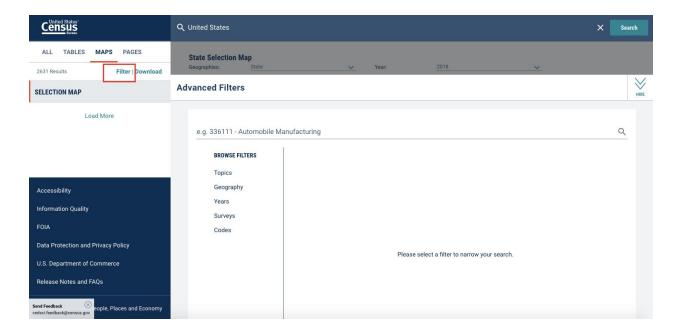**1. Exercise (10 mins):**

data.census.gov
- Go to the United States Census Bureau data portal on your web browser at https://data.census.gov
- Scroll down to the section of the page titled "Tables," with the image of the laptop and click on the "**View Tables"** button

- In the top left-hand corner toolbar, click on "Map." A map of the United States will appear next to the toolbar (Note: the map feature works best on Chrome and Safari)
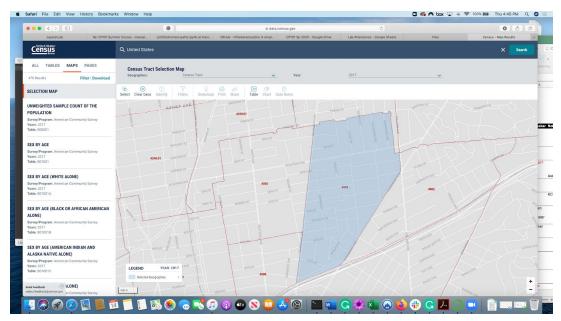
- Under the toolbar on your left click "Filter." An "Advanced Filter" window will appear.

- Click on "Surveys" and select ACS 5-Year Estimates Detailed Tables. Click on "Years" and select **2018**
- Click on "Geography" and select "Tract." This will get us data at the tract level. From here, a "Within State" section will appear, select California. Select Alameda County, another section called "Alameda County, California" will appear and you can **select the tract you are assigned** [or use 4004 for the purpose of this lab]
- MAKE SURE the filters you have applied show up under "Selected Filters" at the bottom of the Advanced Filter window. This may take more than 1 minute. Once the filters have

been applied, click on the "Hide" button in the top right of the Advanced Filter window to see your selected tract on the map.

Note: 2018 ACS 5-Year Estimates use tract boundaries established for the 2010 Census. Tract boundaries used for the 2000 Decennial Census and Tables from earlier versions of the ACS may be different.

2. Exercise: Downloading ACS data for a census tract or city (15 mins)

Find filters

- Go back to the toolbar on the left-hand side and click on "Tables." A list of tables with the information for your selected census tract will be on the left-hand side. Select a table from the list; the data for the selected table will be shown on the right.
- Next, let's also select the city that the tract is located in so that we can compare the tract data to citywide data. Start by clicking on "Filter" under the toolbar, your previous selections will appear. '

Filter 1: Geography

- In the Geography column select Place, then in the "Within (State)" column select California, and in the "California" column select the "place" that houses your Census Tract (e.g. Tract 4004 is in Oakland). You can also use the sear bar within the column to find the place. Be sure to check that the place you selected is listed under the "Selected Filters" section at the bottom of the window.

  Note on terminology: A Census-Designated Place (CDP) includes both incorporated cities, like Oakland and San Francisco, and unincorporated locations, like Kensington and North Richmond.

Search by Table ID (If You Have It)
- Click on the search bar at the top of the site (in the lighter shade of blue) and click on "Advanced Search." You will be led to another page where you will see all of the filters you applied at the bottom of the site (tract, place, survey, and year). In the search bar under "Advanced Search," enter the following data table id: **B01003**, which contains **Total Population,** and click on SEARCH at the bottom of your screen. Click on "TABLES" in the toolbar to see the data.
- Now download the data. Do this by clicking "Download," click on the appropriate table in the column, and then click "Download Selected."
- Your data will be downloaded in the comma-separated values (csv) format.
- Once you have your file downloaded, unzip it and take a look at it Excel (you can open it in Excel even though .csv is not, strictly speaking, an Excel file format).
  - Is each column from the original table displayed correctly in Excel?
  - If not, select the column(s) that contain your data in Excel
  - Then go to Data and select Text_to_Columns. Then select Delimited, click on Comma, and then on Finish

If you find data.census.gov to be a little tricky to use, you're not alone. You should eventually start to get the hang of how it works after working with it a couple of times more.

Now use your Excel skills to calculate the percentage of the population that lives in the census tract selected

DIY Exercise: Download More Data
- Go back to the census data website. In the "Advanced Search" option in the search bar, repeat the previous process for the following four data tables (labeled below*): B03002, B11016, B08301, B19001. (Make sure you still have the same geography selections under 'Selected Filters' at the bottom of the site) .
- Give your tables a look once you've downloaded them. If you're familiar with the tract and the city you've been working with, do the numbers generally square with what you would intuitively expect?

*B01003: Total Population; B03002: Hispanic or Latino by Race; B08301: Means of Transportation to Work; B11016: Household Type by Household Size; B19001: Household Income in the Past 12 Months (in 2018 Inflation-Adjusted Dollars)