Using the American Community Survey Equal Employment Opportunity (EEO) Application Programming Interface (API)

This step-by-step guide shows how to get data from the American Community Survey (ACS) 5-Year Equal Employment Opportunity (EEO) Tabulation from the application programming interface (API). The API allows you to view data in your web browser and with a few easy steps, you can also convert the results into an Excel file.

Explore the following API examples to learn how to:

- Get data for multiple EEO estimates
- Get data for all estimates in an EEO data table
- Save API results as a .csv file and format in Excel

Getting Data for Multiple EEO Estimates:
Percent of Top Executives by Sex for All States based on Worksite Geography

Step 1: Find Example API Queries

Navigate to the list of example API data queries for the EEO dataset:

- Using Google Chrome, visit the Census Bureau's Developers webpage[1]
- On the left side of the screen click **Available APIs**

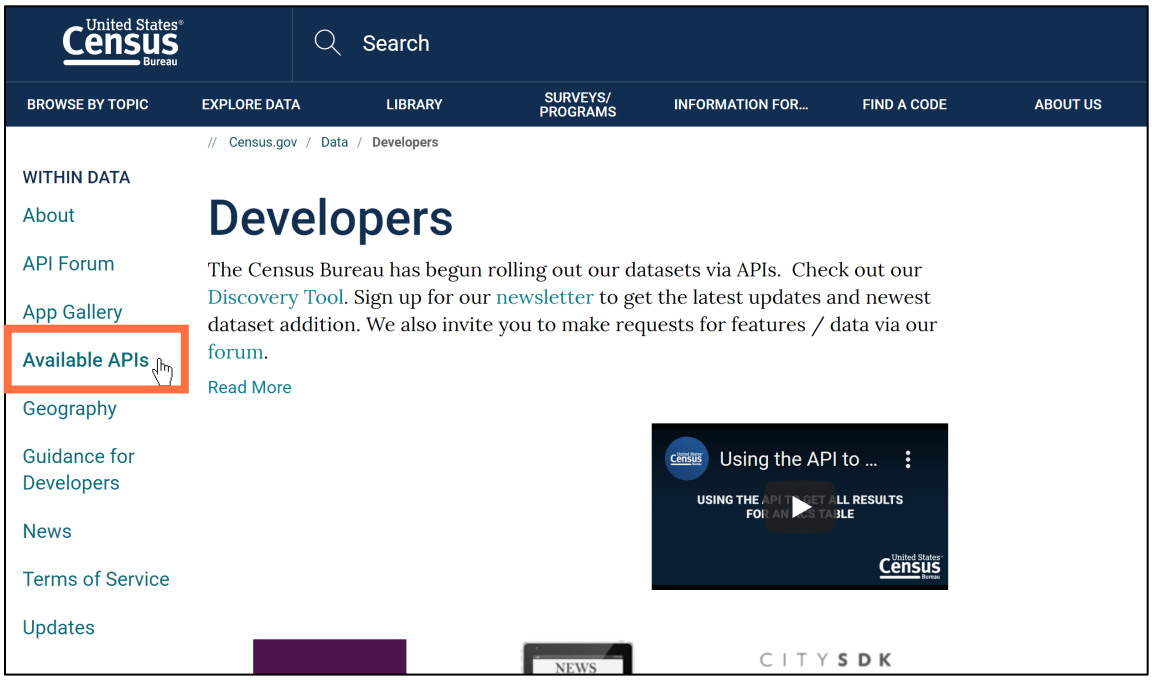


Figure 1: Developers Page https://www.census.gov/data/developers.html

[1] https://www.census.gov/data/developers.html

- Click **American Community Survey (ACS)** and choose **American Community Survey 5-Year Data**

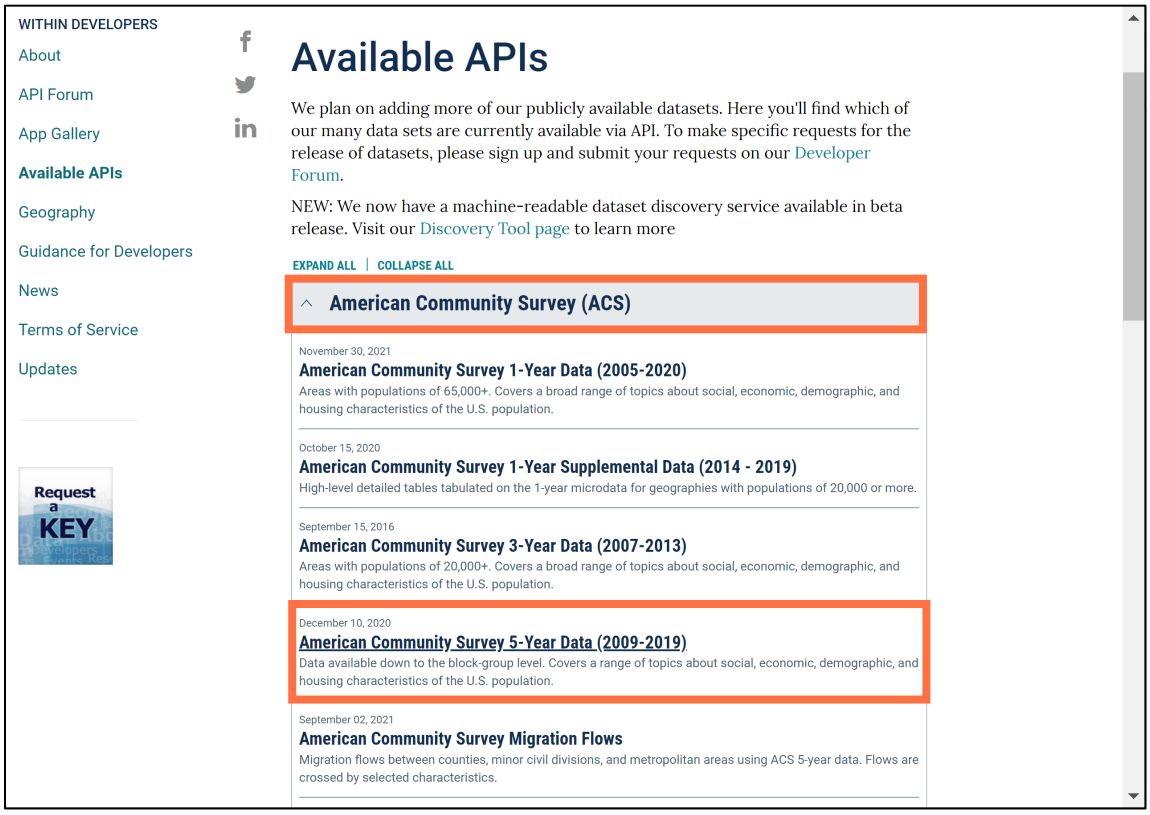


Figure 2: Available APIs Page https://www.census.gov/data/developers/data-sets.html

- Scroll down and click the tab for **2018**. This will provide a list of all available types of 2018 ACS 5-year datasets in the API.

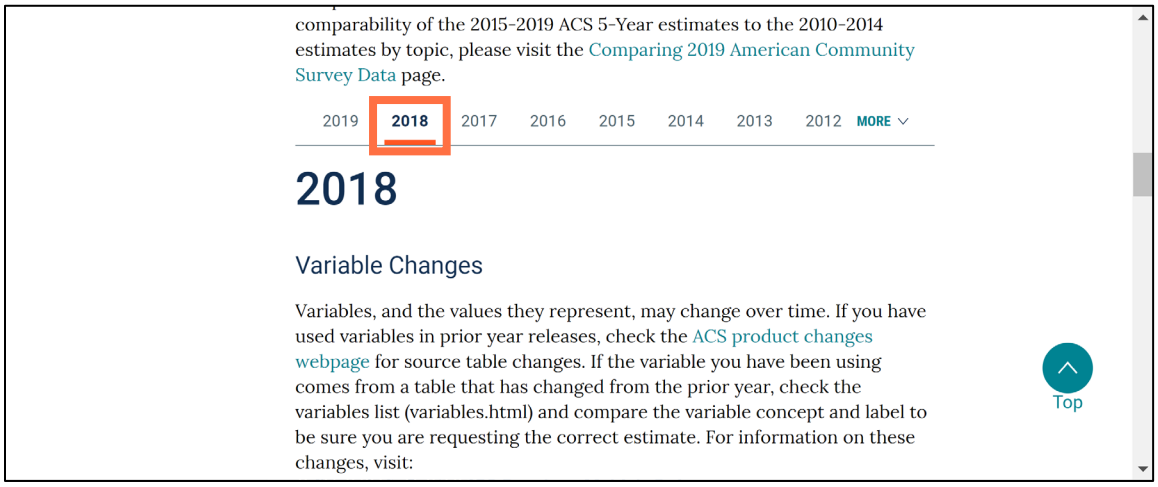


Figure 3: 2018 ACS 5-Year Available APIs https://www.census.gov/data/developers/data-sets/acs-5year.2018.html

- Scroll down to the EEO section and click the **Examples** link

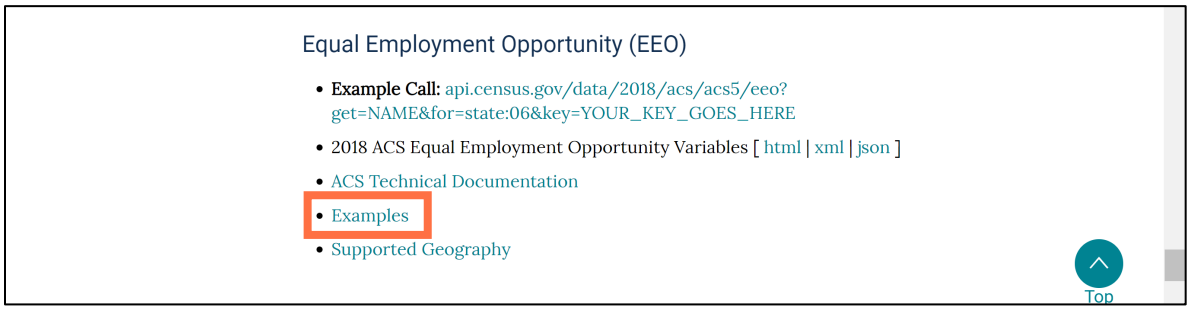
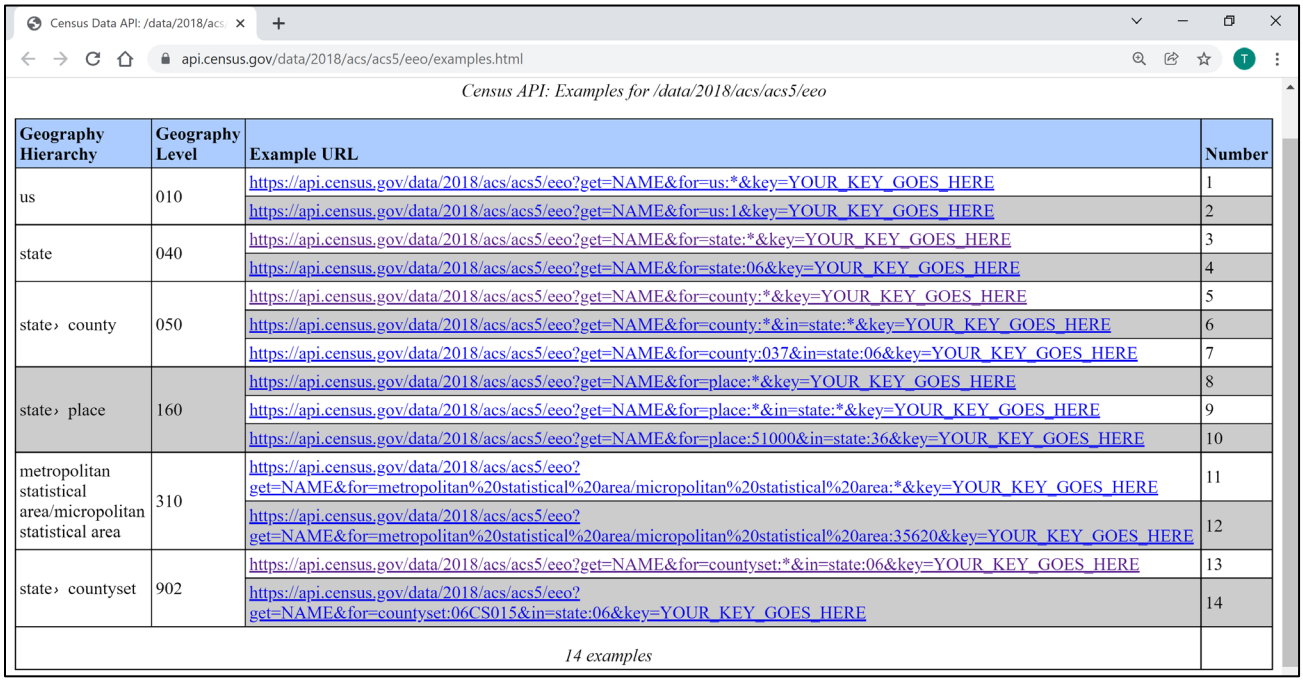


Figure 4: Link to Example API Queries for the 2018 ACS 5-Year EEO Dataset

- This opens a list of supported geographic summary levels for this dataset, with a few example API calls for each type of geography



Geography Hierarchy	Geography Level	Example URL	Number
us	010	https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=us:*&key=YOUR_KEY_GOES_HERE	1
		https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=us:1&key=YOUR_KEY_GOES_HERE	2
state	040	https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=state:*&key=YOUR_KEY_GOES_HERE	3
		https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=state:06&key=YOUR_KEY_GOES_HERE	4
state› county	050	https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=county:*&key=YOUR_KEY_GOES_HERE	5
		https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=county:*&in=state:*&key=YOUR_KEY_GOES_HERE	6
		https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=county:037&in=state:06&key=YOUR_KEY_GOES_HERE	7
state› place	160	https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=place:*&key=YOUR_KEY_GOES_HERE	8
		https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=place:*&in=state:*&key=YOUR_KEY_GOES_HERE	9
		https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=place:51000&in=state:36&key=YOUR_KEY_GOES_HERE	10
metropolitan statistical area/micropolitan statistical area	310	https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=metropolitan%20statistical%20area/micropolitan%20statistical%20area:*&key=YOUR_KEY_GOES_HERE	11
		https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=metropolitan%20statistical%20area/micropolitan%20statistical%20area:35620&key=YOUR_KEY_GOES_HERE	12
state› countyset	902	https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=countyset:*&in=state:06&key=YOUR_KEY_GOES_HERE	13
		https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=countyset:06CS015&in=state:06&key=YOUR_KEY_GOES_HERE	14
14 examples			

Figure 5: Example API Queries for 2018 ACS 5-Year EEO Dataset https://api.census.gov/data/2018/acs/acs5/eeo/examples.html

Step 2: Specify Geographies

Choose an example URL that best matches your desired geographies. In this case, we want data for all states.

- You will see two example API queries at the state level:
  - &for=state* provides data for all states (wildcards indicated by * provide all available values)
  - &for=state:06 provides data for California

Geography Hierarchy	Geography Level	Example URL
us	010	https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=us:*&key=YOUR_KEY_GOES_HERE
		https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=us:1&key=YOUR_KEY_GOES_HERE
state	040	https://api.census.gov/data/2018/acs/acs5/eeo?get=NAM&for=state:*&key=YOUR_KEY_GOES_HERE
		https://api.census.gov/data/2018/acs/acs5/eeo?get=NAM&for=state:06&key=YOUR_KEY_GOES_HERE

Figure 6: Example API Queries for 2018 ACS 5-Year EEO at the State Level

- Copy the first state example API query that provides data for all states (&for=state:*)

Geography Hierarchy	Geography Level	Example URL
us	010	https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=us:*&key=YOUR_KEY_GOES_HERE
		https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=us:1&key=YOUR_KEY_GOES_HERE
state	040	https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=state:*&key=YOUR_KEY_GOES_HERE
		https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=state:06&key=YOUR_KEY_GOES_HERE

Figure 7: The First Example API Query for 2018 ACS 5-Year EEO at the State Level

- Paste the URL in a new tab in Google Chrome.
- Delete **&key=YOUR_KEY_GOES_HERE** if it appears in your copied URL, and then press enter. API keys are only needed if you are making more than 500 queries per IP address in a day.

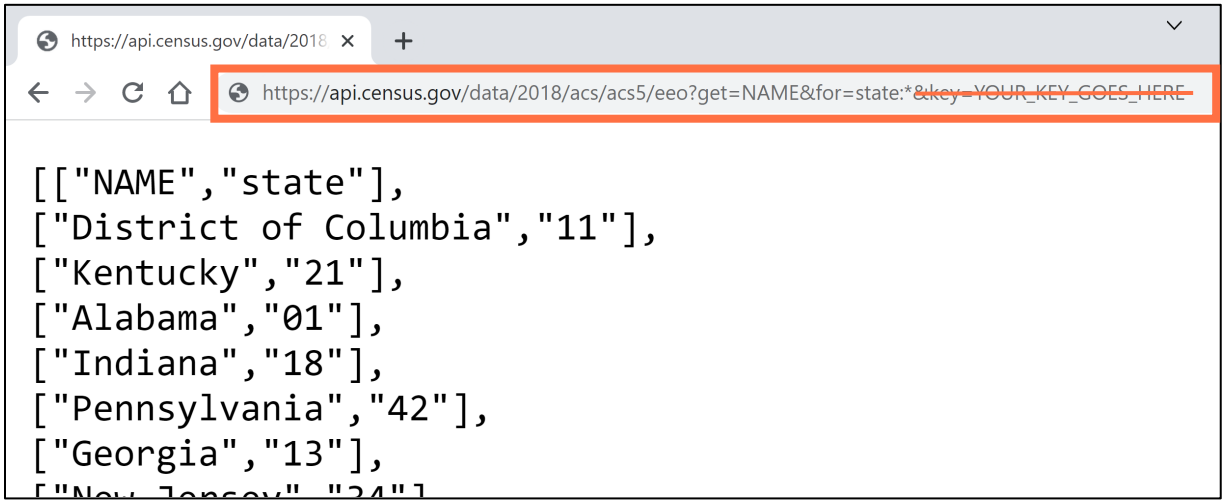


*Figure 8: API Results for https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=state:**

This provides results for all states. The next step is to add your desired data variables.

Step 3: Add Variables

- You can add up to 50 variables in one API query. To find a list of all available EEO variables, click the **html link for the 2018 ACS Equal Employment Opportunity Variables** from the EEO section of the ACS 5-Year Available APIs page[2] we navigated to in Step 1.

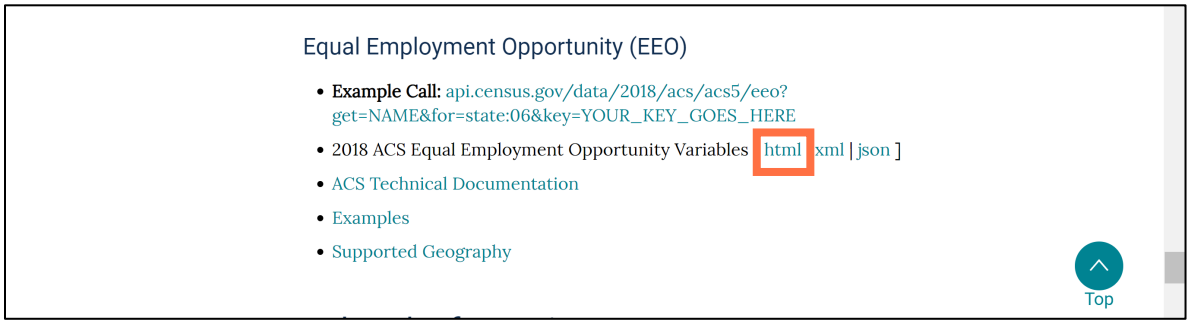
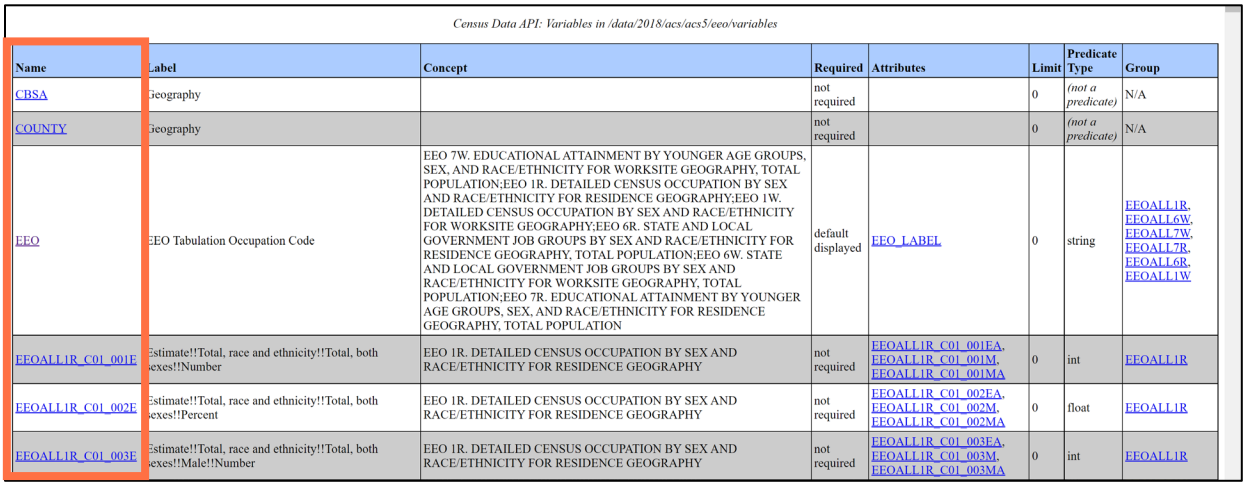


Figure 9: Link to Variables for the 2018 ACS 5-Year EEO Dataset

[2] https://www.census.gov/data/developers/data-sets/acs-5year.2018.html

- View the list of variables for this dataset. They are sorted in alphanumeric order by variable name in the first column.

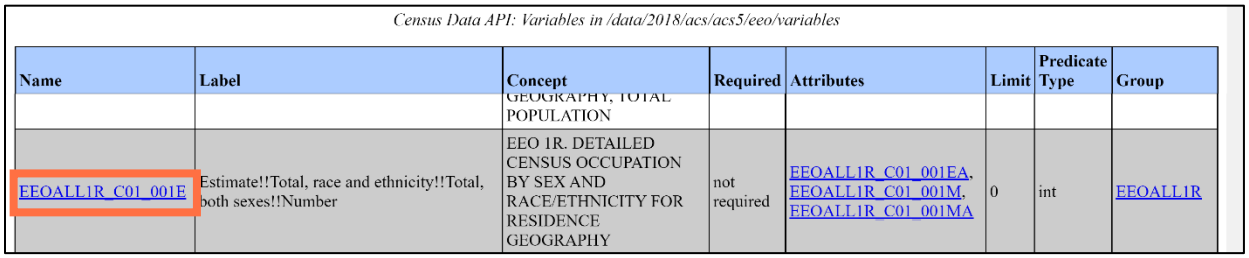


Census Data API: Variables in /data/2018/acs/acs5/eeo/variables

Name	Label	Concept	Required	Attributes	Limit	Predicate Type	Group
CBSA	Geography		not required		0	*(not a predicate)*	N/A
COUNTY	Geography		not required		0	*(not a predicate)*	N/A
EEO	EEO Tabulation Occupation Code	EEO 7W. EDUCATIONAL ATTAINMENT BY YOUNGER AGE GROUPS, SEX, AND RACE/ETHNICITY FOR WORKSITE GEOGRAPHY, TOTAL POPULATION;EEO 1R. DETAILED CENSUS OCCUPATION BY SEX AND RACE/ETHNICITY FOR RESIDENCE GEOGRAPHY;EEO 1W. DETAILED CENSUS OCCUPATION BY SEX AND RACE/ETHNICITY FOR WORKSITE GEOGRAPHY;EEO 6R. STATE AND LOCAL GOVERNMENT JOB GROUPS BY SEX AND RACE/ETHNICITY FOR RESIDENCE GEOGRAPHY, TOTAL POPULATION;EEO 6W. STATE AND LOCAL GOVERNMENT JOB GROUPS BY SEX AND RACE/ETHNICITY FOR WORKSITE GEOGRAPHY, TOTAL POPULATION;EEO 7R. EDUCATIONAL ATTAINMENT BY YOUNGER AGE GROUPS, SEX, AND RACE/ETHNICITY FOR RESIDENCE GEOGRAPHY, TOTAL POPULATION	default displayed	EEO_LABEL	0	string	EEOALL1R, EEOALL6W, EEOALL7W, EEOALL7R, EEOALL6R, EEOALL1W
EEOALL1R_C01_001E	Estimate!!Total, race and ethnicity!!Total, both sexes!!Number	EEO 1R. DETAILED CENSUS OCCUPATION BY SEX AND RACE/ETHNICITY FOR RESIDENCE GEOGRAPHY	not required	EEOALL1R_C01_001EA, EEOALL1R_C01_001M, EEOALL1R_C01_001MA	0	int	EEOALL1R
EEOALL1R_C01_002E	Estimate!!Total, race and ethnicity!!Total, both sexes!!Percent	EEO 1R. DETAILED CENSUS OCCUPATION BY SEX AND RACE/ETHNICITY FOR RESIDENCE GEOGRAPHY	not required	EEOALL1R_C01_002EA, EEOALL1R_C01_002M, EEOALL1R_C01_002MA	0	float	EEOALL1R
EEOALL1R_C01_003E	Estimate!!Total, race and ethnicity!!Total, both sexes!!Male!!Number	EEO 1R. DETAILED CENSUS OCCUPATION BY SEX AND RACE/ETHNICITY FOR RESIDENCE GEOGRAPHY	not required	EEOALL1R_C01_003EA, EEOALL1R_C01_003M, EEOALL1R_C01_003MA	0	int	EEOALL1R

Figure 10: Variables for 2018 ACS 5-Year EEO Dataset https://api.census.gov/data/2018/acs/acs5/eeo/variables.html

- The variables for this dataset use a code-based naming convention. The codes tell you the table, column, row, and type of variable.



Census Data API: Variables in /data/2018/acs/acs5/eeo/variables

Name	Label	Concept	Required	Attributes	Limit	Predicate Type	Group
		GEOGRAPHY, TOTAL POPULATION					
EEOALL1R_C01_001E	Estimate!!Total, race and ethnicity!!Total, both sexes!!Number	EEO 1R. DETAILED CENSUS OCCUPATION BY SEX AND RACE/ETHNICITY FOR RESIDENCE GEOGRAPHY	not required	EEOALL1R_C01_001EA, EEOALL1R_C01_001M, EEOALL1R_C01_001MA	0	int	EEOALL1R

Figure 11: Variable EEOALL1R_C01_001E from the 2018 ACS 5-Year EEO Dataset

For example, variable EEOALL1R_C01_001E

- EEOALL1R = Table ID
- C01 = column 1 of the table
- 001 = row 1 of the table
- E = estimate

This means the variable provides data for the estimate that appears in the first column and first row of table EEOALL1R. You can explore the layout of EEO data tables by visiting the EEO table shells[3].

The letters near the end of EEO Table IDs are meaningful:

- Table IDs with an R provide data based on where people live (residence tables)
- Table IDs with a W primarily provide data based on where people work (worksite tables). A few W tables provide data on worksite flows, showing where people work (worksite) and where people commute from (place of residence).

[3] https://www2.census.gov/EEO_2014_2018/EEO_FTP_Site_Documentation/

- Gather a list of the data variables you need. In this case, we want the values for the total percent of workers by sex based on the worksite geography. Data for these two variables are contained in the first column of table EEOALL1W, in rows 4 and 6. See the corresponding API variable names below.

  API Variable Names:
  EEOALL1W_C01_004E, Total Percent Male
  EEOALL1W_C01_006E, Total Percent Female

Census Data API: Variables in /data/2018/acs/acs5/eeo/variables

Name	Label	Concept	Required	Attributes	Limit	Predicate Type	Group
		FOR WORKSITE GEOGRAPHY					
EEOALL1W_C01_004E	Estimate!!Total, race and ethnicity!!Total, both sexes!!Male!!Percent	EEO 1W. DETAILED CENSUS OCCUPATION BY SEX AND RACE/ETHNICITY FOR WORKSITE GEOGRAPHY	not required	EEOALL1W_C01_004EA, EEOALL1W_C01_004M, EEOALL1W_C01_004MA	0	float	EEOALL1W
EEOALL1W_C01_005E	Estimate!!Total, race and ethnicity!!Total, both sexes!!Female!!Number	EEO 1W. DETAILED CENSUS OCCUPATION BY SEX AND RACE/ETHNICITY FOR WORKSITE GEOGRAPHY	not required	EEOALL1W_C01_005EA, EEOALL1W_C01_005M, EEOALL1W_C01_005MA	0	int	EEOALL1W
EEOALL1W_C01_006E	Estimate!!Total, race and ethnicity!!Total, both sexes!!Female!!Percent	EEO 1W. DETAILED CENSUS OCCUPATION BY SEX AND RACE/ETHNICITY FOR WORKSITE GEOGRAPHY	not required	EEOALL1W_C01_006EA, EEOALL1W_C01_006M, EEOALL1W_C01_006MA	0	float	EEOALL1W

Figure 12: Variables EEOALL1W_C01_004E and EEOALL1W_C01_006E in the 2018 ACS 5-Year EEO Dataset

NOTE: Each estimate in this dataset also has attributes that end in EA, M, or MA. Attributes are additional variables you can include in your API call that give more information for the primary variable. In this case, the attribute that ends in M provide the margin of error and the attributes that end in A provide annotations for the corresponding data if applicable. You can learn more about the meaning of annotations on the notes on ACS estimate and annotation values[4] page.

- Navigate back to the tab with your API query. Enter a comma after NAME and then add both API variable names, separated by a comma: **EEOALL1W_C01_004E,EEOALL1W_C01_006E**
- Press enter to run the updated query and view your results

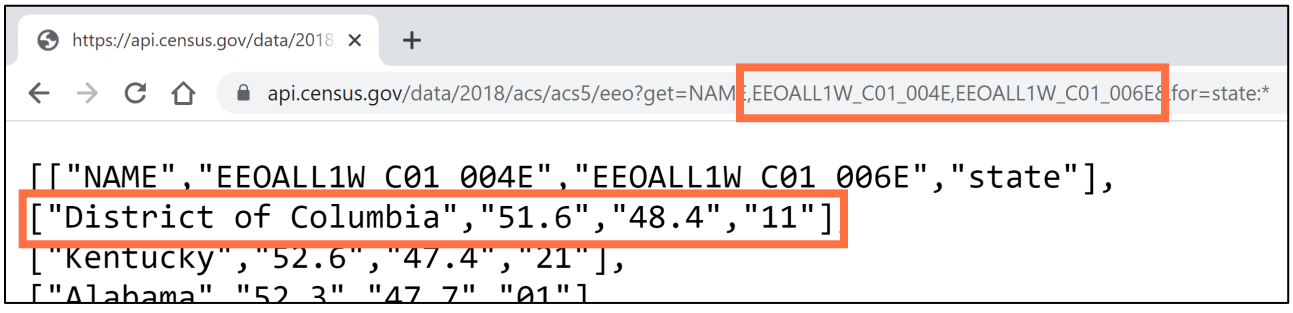


*Figure 13: API Results for https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME,EEOALL1W_C01_004E,EEOALL1W_C01_006E&for=state:**

[4] https://www.census.gov/data/developers/data-sets/acs-1year/notes-on-acs-estimate-and-annotation-values.html

The first row of data tell us that out of the people who work in the District of Columbia:

- 51.6% were male
- 48.4% were female

These results represent data for the estimated number of workers because we have not entered a detailed occupation code into the API query. You may get data by EEO occupation codes for any table that has "Detailed Census Occupation" in the table title, such as EEOALL1W.

Step 4: Add EEO Occupation Code (Optional)

If you are using data variables from a table with "Detailed Census Occupation" in the table title, you may add EEO occupation code variables and predicates to your API query. This will provide data that represent workers by detailed occupation categories, rather than getting results that represent all workers.

- The variables page for the EEO dataset shows us that the variable name for EEO occupation codes is **EEO** and name for their labels is **EEO_LABEL**. You will likely want to include both variable names in your API calls anytime you want data for detailed occupation codes.

Census Data API: Variables in /data/2018/acs/acs5/eeo/variables

Name	Label	Concept	Required	Attributes	Limit	Predicate Type	Group
EEO	EEO Tabulation Occupation Code	OCCUPATION BY SEX AND RACE/ETHNICITY FOR WORKSITE GEOGRAPHY;EEO 6R. STATE AND LOCAL GOVERNMENT JOB GROUPS BY SEX AND RACE/ETHNICITY FOR RESIDENCE GEOGRAPHY, TOTAL POPULATION;EEO	default displayed	EEO_LABEL	0	string	EEOALL1R, EEOALL6W, EEOALL7W, EEOALL7R, EEOALL6R, EEOALL1W

Figure 14: Variables EEO and EEO_LABEL in the 2018 ACS 5-Year EEO Dataset

- Click **EEO** from the variables page to see a list of the available EEO occupation codes for the dataset. Notice the EEO occupation code for Top Executives is 0010.

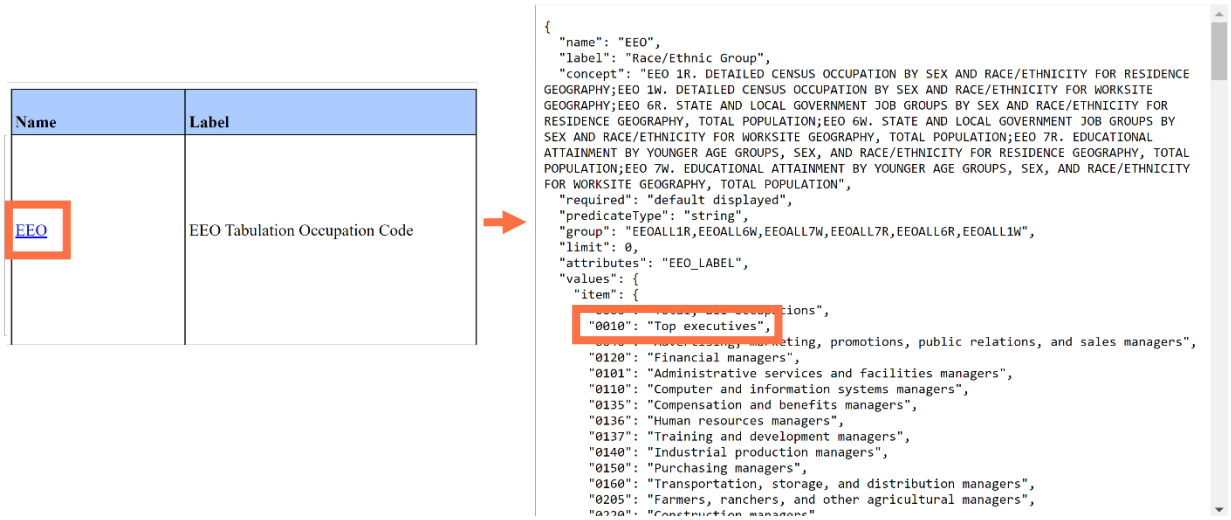


Figure 15: Click the EEO Variable to Get a List of Detailed EEO Occupation Codes

- Add **EEO** and **EEO_LABEL** with the other API variables in your query separated by a comma and press enter to run the query. This provides data for all detailed occupation codes across all states.

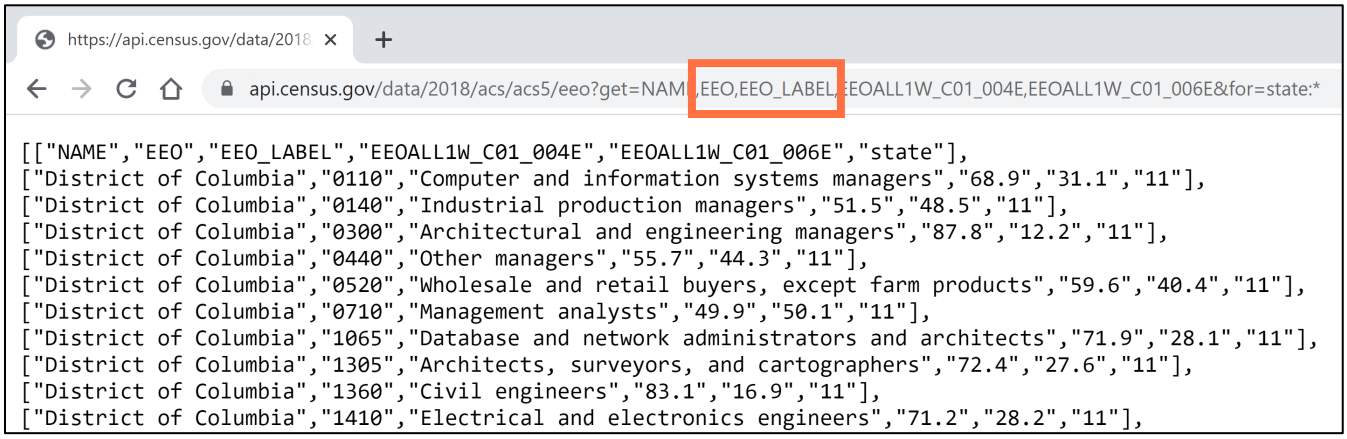


*Figure 16: API Results for https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME,EEO,EEO_LABEL,EEOALL1W_C01_004E,EEOALL1W_C01_006E&for=state:**

- Add the predicate **&EEO=0010** at the end of the API query and press enter. This narrows your results to provide data for the Top Executives occupation code only.

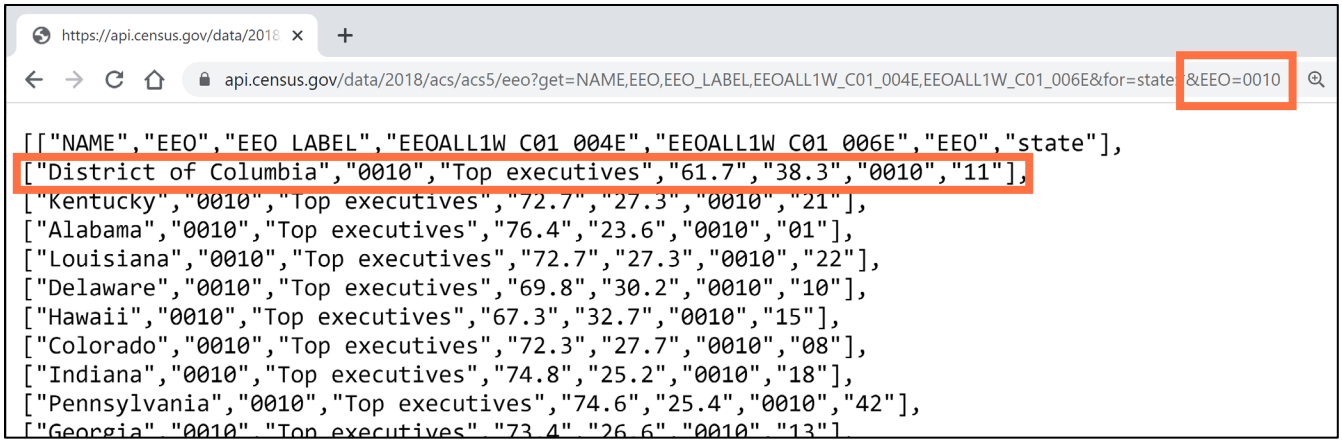


Figure 17: API Results for https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME,EEO,EEO_LABEL,EEOALL1W_C01_004E,EEOALL1W_C01_006E&for=state:&EEO=0010*

The first row of data tell us that out of the people who work in the Top Executives occupation in the District of Columbia:

- 61.7% were male
- 38.3% were female

This provides the information for our data request. You can view the results as-is in your web browser or follow the steps to save API results as a .csv file and format in Excel shown later this in this guide.

Getting Data for All Estimates in an EEO Data Table: Table EEOALL1W for All Detailed Occupation Codes

The API group function allows you to get results for an entire table in one easy command, for example **group(EEOALL1W)**. It provides results for all variables without having to individually specify them in the API group call. Follow the steps below to learn how to make this type of API data call. Many of the steps are similar to process in the first example, but there are key differences.

Step 1: Find Example API Queries

Navigate to the list of API examples for the EEO dataset:

- Using Google Chrome, visit the Census Bureau's Developers webpage[5]
- On the left side of the screen click **Available APIs**

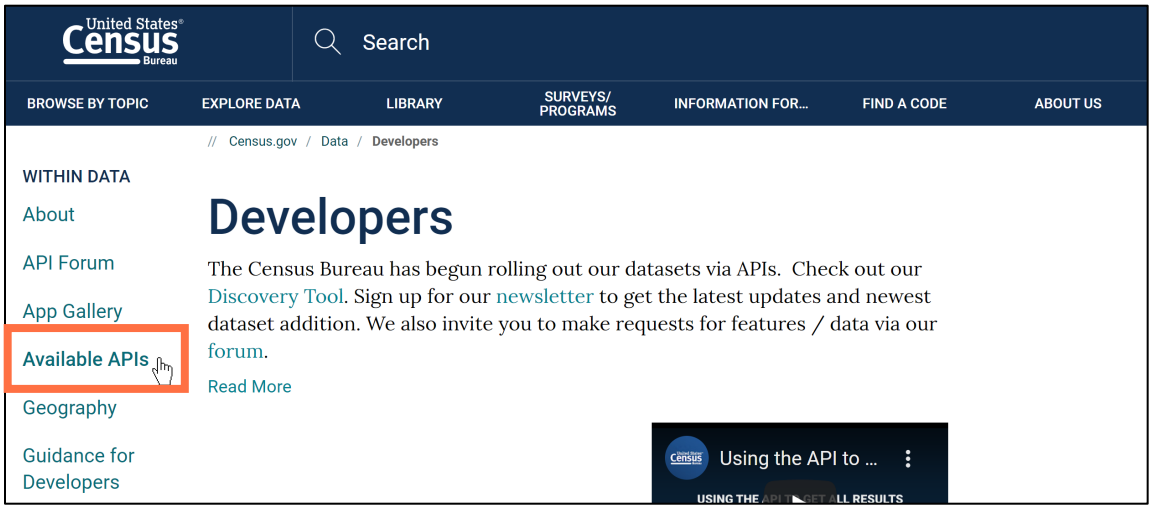


Figure 18: Developers Page https://www.census.gov/data/developers.html

[5] https://www.census.gov/data/developers.html

- Click **American Community Survey (ACS)** and choose **American Community Survey 5-Year Data**

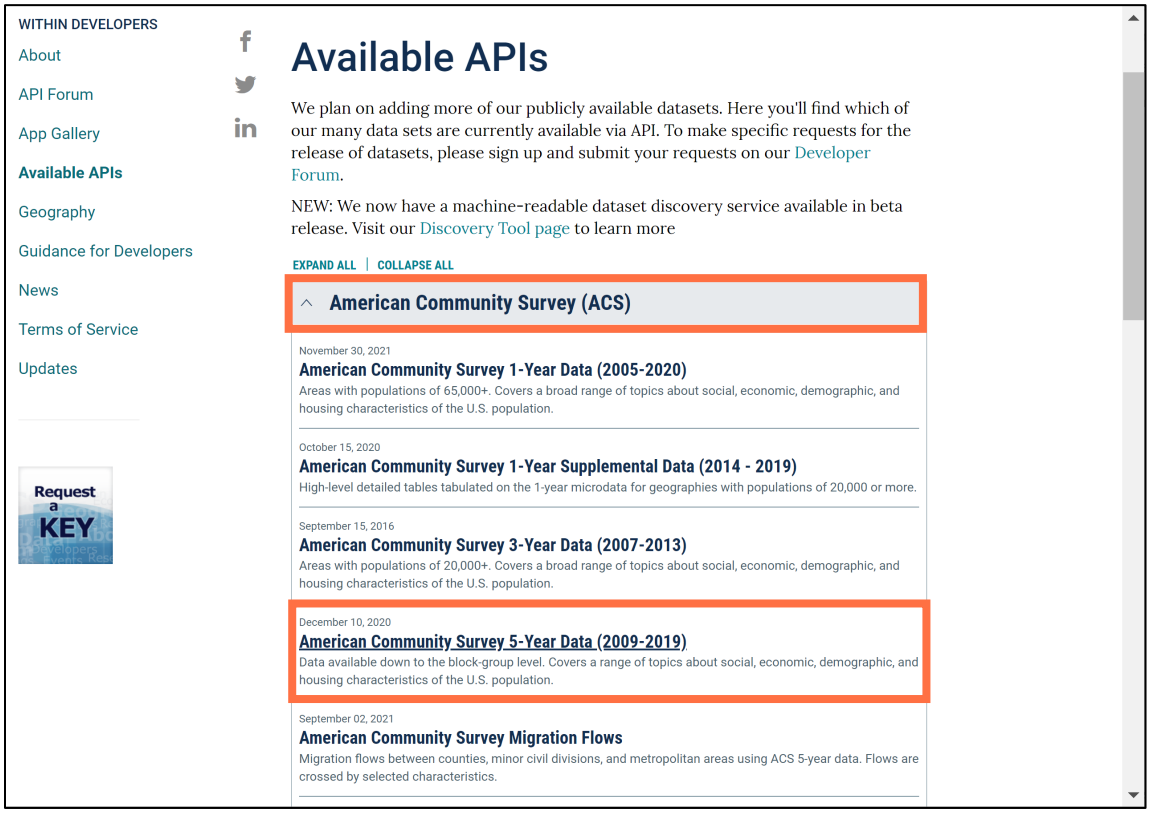


Figure 19: Available APIs Page https://www.census.gov/data/developers/data-sets.html

- Scroll down and click the tab for **2018**. This provides a list of all available types of 2018 ACS 5-year datasets in the API.

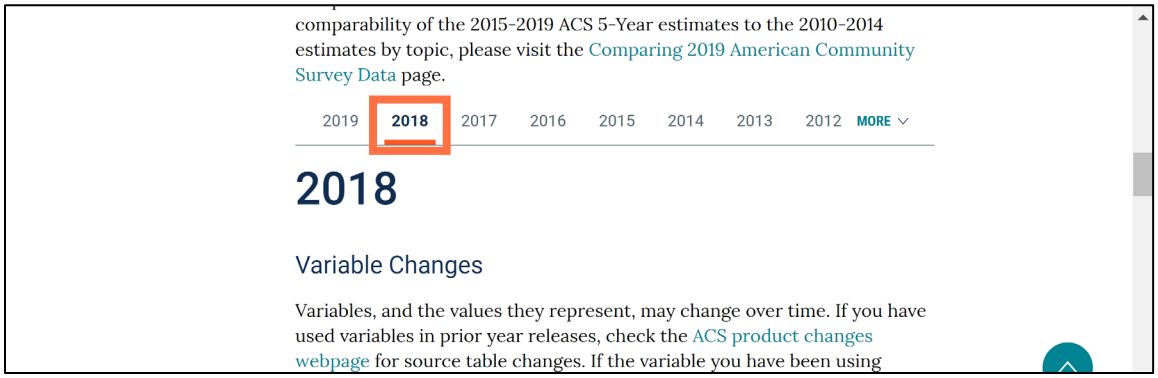


Figure 20: 2018 ACS 5-Year Available APIs https://www.census.gov/data/developers/data-sets/acs-5year.2018.html

- Scroll down to the EEO section and click the **Examples** link

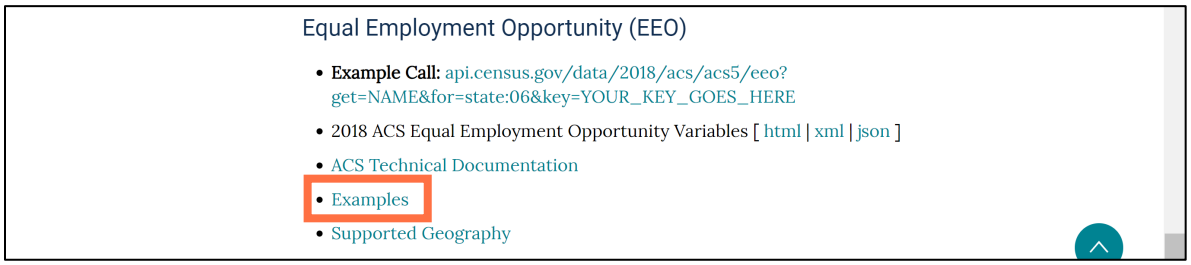


Figure 21: Link to Example API Queries for the 2018 ACS 5-Year EEO Dataset

- This opens a list of supported geographic summary levels for this dataset, with a few example API calls for each type of geography.

Geography Hierarchy	Geography Level	Example URL	Number
us	010	https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=us:*&key=YOUR_KEY_GOES_HERE	1
		https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=us:1&key=YOUR_KEY_GOES_HERE	2
state	040	https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=state:*&key=YOUR_KEY_GOES_HERE	3
		https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=state:06&key=YOUR_KEY_GOES_HERE	4
state› county	050	https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=county:*&key=YOUR_KEY_GOES_HERE	5
		https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=county:*&in=state:*&key=YOUR_KEY_GOES_HERE	6
		https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=county:037&in=state:06&key=YOUR_KEY_GOES_HERE	7
state› place	160	https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=place:*&key=YOUR_KEY_GOES_HERE	8
		https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=place:*&in=state:*&key=YOUR_KEY_GOES_HERE	9
		https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=place:51000&in=state:36&key=YOUR_KEY_GOES_HERE	10
metropolitan statistical area/micropolitan statistical area	310	https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=metropolitan%20statistical%20area/micropolitan%20statistical%20area:*&key=YOUR_KEY_GOES_HERE	11
		https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=metropolitan%20statistical%20area/micropolitan%20statistical%20area:35620&key=YOUR_KEY_GOES_HERE	12
state› countyset	902	https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=countyset:*&in=state:06&key=YOUR_KEY_GOES_HERE	13
		https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=countyset:06CS015&in=state:06&key=YOUR_KEY_GOES_HERE	14

Figure 22: Example API Queries for 2018 ACS 5-Year EEO Dataset https://api.census.gov/data/2018/acs/acs5/eeo/examples.html

Step 2: Specify Geographies

Choose and edit an example URL for your desired geographies (all counties in California).

- You will see three examples at the county level:
  - &for=county:* provides data for all counties.
  - &for=county:*&in=state:* provides data for all counties across all states. This is a more formal way to specify the full geography hierarchy.
  - &for=county:037&in=state:06 provides data for Los Angeles County, CA.
    (A wildcard, indicated by an asterisk * provides data for all values of a variable or geography)

Geography Hierarchy	Geography Level	Example URL
us	010	https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=us:*&key=YOUR_KEY_GOES_HERE
		https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=us:1&key=YOUR_KEY_GOES_HERE
state	040	https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=state:*&key=YOUR_KEY_GOES_HERE
		https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=state:06&key=YOUR_KEY_GOES_HERE
state› county	050	https://api.census.gov/data/2018/acs/acs5/eeo?get=NAM&for=county:*&key=YOUR_KEY_GOES_HERE
		https://api.census.gov/data/2018/acs/acs5/eeo?get=NAM&for=county:*&in=state:*&key=YOUR_KEY_GOES_HERE
		https://api.census.gov/data/2018/acs/acs5/eeo?get=NAM&for=county:037&in=state:06&key=YOUR_KEY_GOES_HERE

Figure 23: Example API Queries for 2018 ACS 5-Year EEO at the County Level

- Copy the second URL that provides data for all counties across all states (&for=county:*&in=state:*). This option allows you to easily explore the relevant geography codes in your web browser and edit the URL for your specific data needs.

Geography Hierarchy	Geography Level	Example URL
us	010	https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=us:*&key=YOUR_KEY_GOES_HERE
		https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=us:1&key=YOUR_KEY_GOES_HERE
state	040	https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=state:*&key=YOUR_KEY_GOES_HERE
		https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=state:06&key=YOUR_KEY_GOES_HERE
state› county	050	https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=county:*&key=YOUR_KEY_GOES_HERE
		https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=county:*&in=state:*&key=YOUR_KEY_GOES_HERE
		https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=county:037&in=state:06&key=YOUR_KEY_GOES_HERE

Figure 24: The Second Example API Query for 2018 ACS 5-Year EEO at the County Level Provides Data for All Counties in All States

- Paste the URL in a new tab in Google Chrome.
- Delete **&key=YOUR_KEY_GOES_HERE** if it appears in your copied URL and press enter.

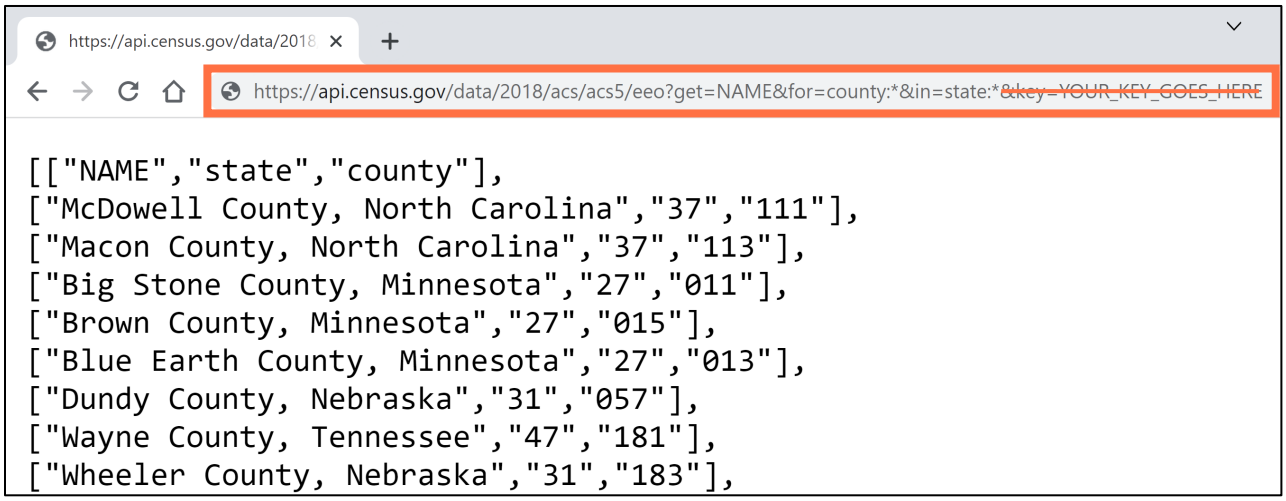


Figure 25: API Results for [https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=county:&in=state:*](https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=county:*&in=state:*)*

This provides results for all counties.

- Press **Ctrl + F** and type **California** in the search box. Notice the state code for California is 06.

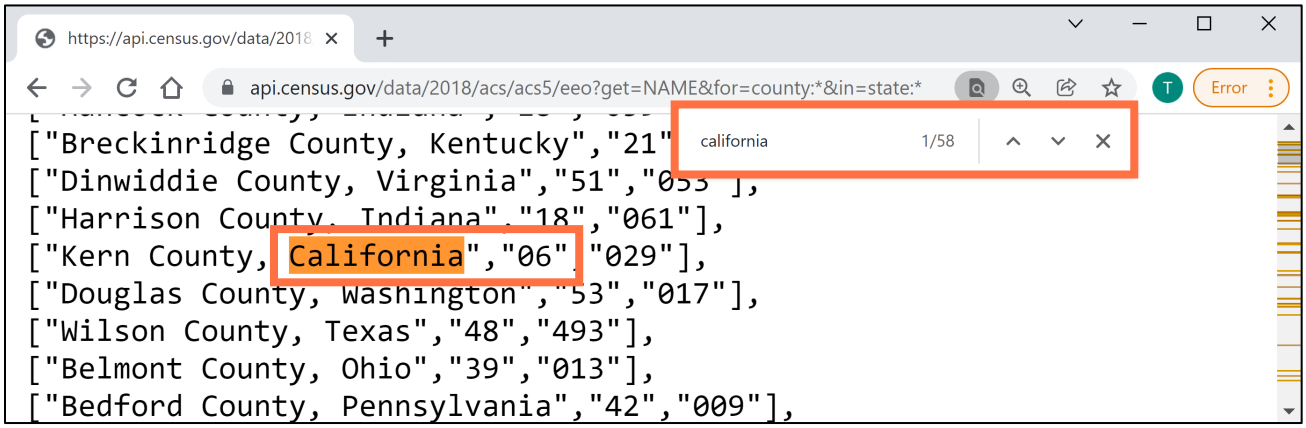


Figure 26: The State Code for California is 06

- Replace the state wildcard with 06 so that geography portion of your API query reads **&for=county:*&in=state:06** and press enter to update your results.

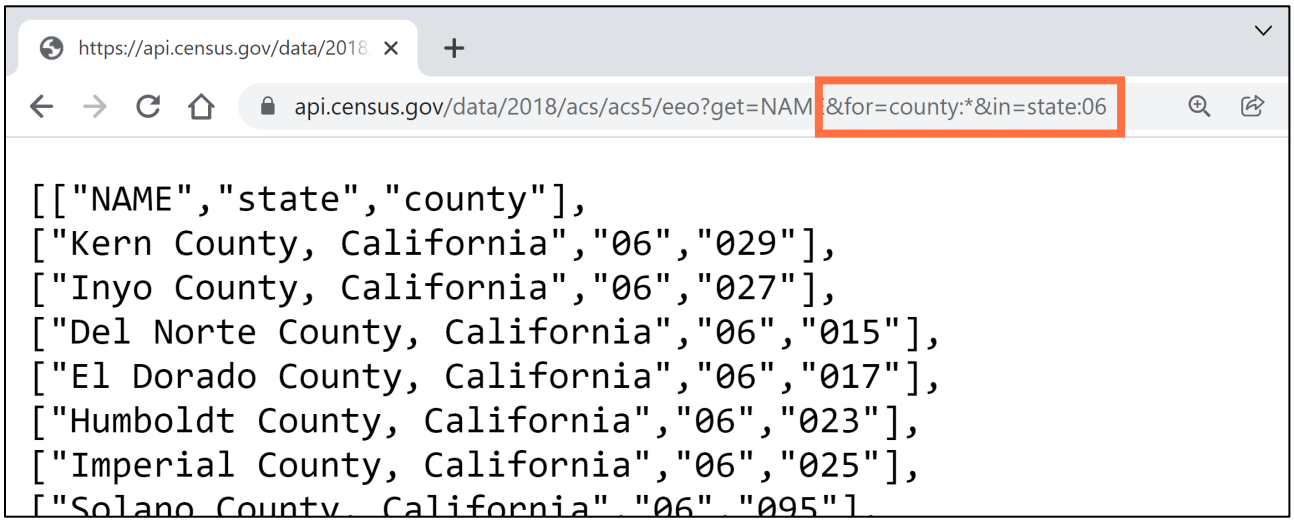


Figure 27: API Results for https://api.census.gov/data/2018/acs/acs5/eeo?get=NAME&for=county:&in=state:06*

This provides results for all counties in California. The next step is to add the group function and specify the table ID we need.

Step 3: Add Table ID

Add the group function and table ID

- Replace the variable for **NAME** with the group function containing your desired table ID in parenthesis: **group(EEOALL1W).** Check out the groups section of the API Discovery Tool for the EEO dataset[6] to get a list of all available table IDs with a description of each table's variables.
- Press enter to update your results



Figure 28: API Results for https://api.census.gov/data/2018/acs/acs5/eeo?get=group(EEOALL1W)&for=county:&in=state:06*

[6] https://api.census.gov/data/2018/acs/acs5/eeo/groups.html

- The API group call provides data for all 192 data variables in table EEOALL1W, as well as the geography ID, geography name, state code, and county code. Large API data requests like this will be difficult for you to read in a web browser, but you can convert it to an Excel file following a few easy steps in the next example.

  Please be aware:
  - If the table is available for detailed census occupation codes, you will get data for all possible EEO codes by default when using the API group function. You may add a predicate such as &EEO=0010 to the end of your API query if you would like to get the data for a single occupation code.
    For example, this query with &EEO=0010 provides data for all variables from table EEOALL1W for all counties in California for workers with an occupation of Top Executives
    https://api.census.gov/data/2018/acs/acs5/eeo?get=group(EEOALL1W)&for=county:*&in=state:06**&EEO=0010**

  - Data are only provided for counties that have populations of 50,000 or more. This is due to population thresholds for this table set. See the EEO technical documentation[7] for more details.

Saving API Results as .csv file and Formatting in Excel

After getting results for an API query in your web browser, you may be interested in saving the results as a .csv file. This is helpful if you want to work with the data or view it in Excel. Follow the easy steps below to learn how to save and reformat the data into Excel.

Step 1: Save API Results as a .csv File

- Run an API query in Google Chrome. Here we will be working with the API call that gives results for all data variables from table EEOALL1W for all counties in California.
  https://api.census.gov/data/2018/acs/acs5/eeo?get=group(EEOALL1W)&for=county:*&in=state:06
- **Right click the page** and choose **Save As**

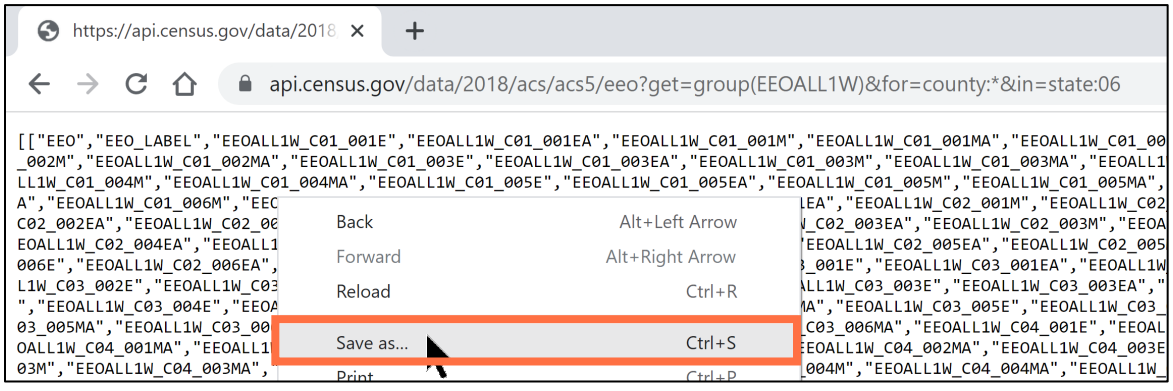


Figure 29: Save API Result for https://api.census.gov/data/2018/acs/acs5/eeo?get=group(EEOALL1W)&for=county:&in=state:06*

[7] https://www.census.gov/topics/employment/equal-employment-opportunity-tabulation/guidance/2014-2018-eeo.html

- Title the file and add **.csv** to the end the file name
- Click the **Save as type** drop-down menu and choose **All Files**
- Click **Save**

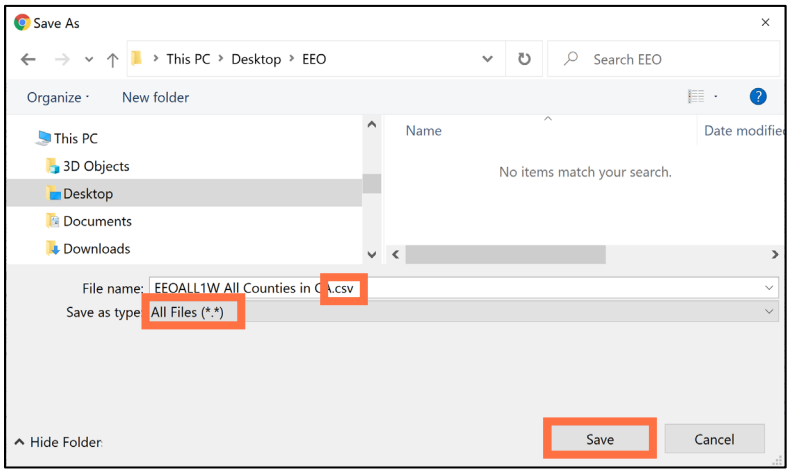


Figure 30: Save As Pop-Up Window

- Click the file in the lower left of Google Chrome to open it in Excel

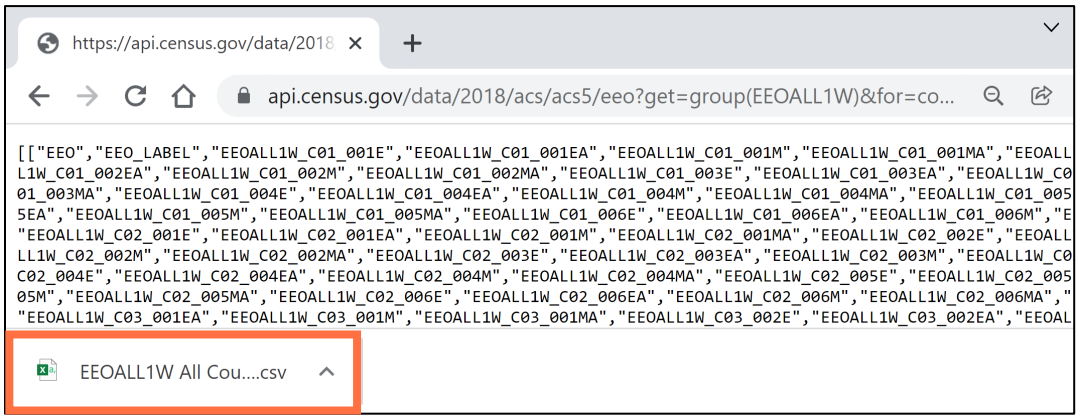
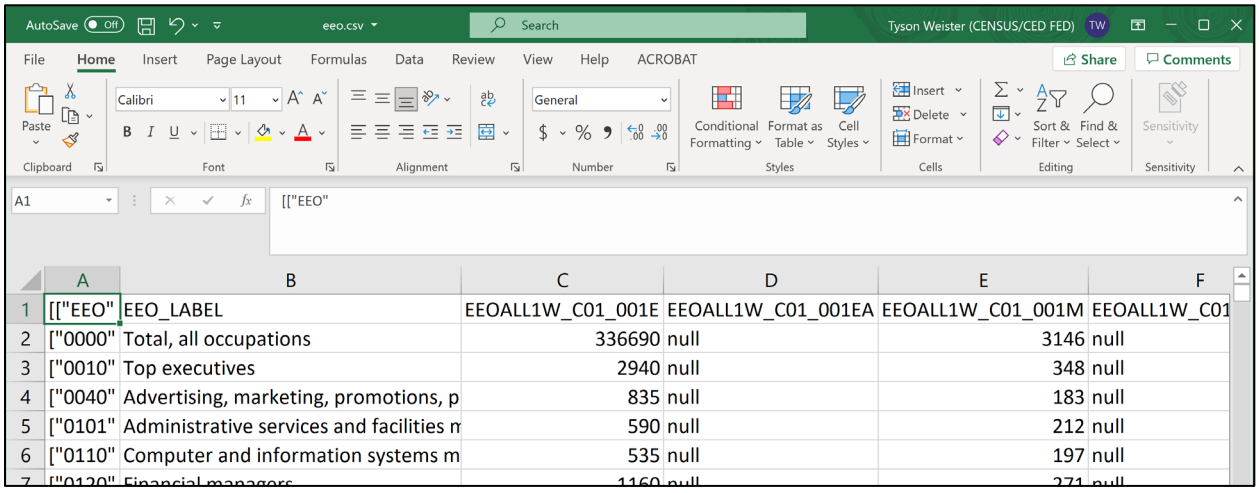


Figure 31: Saved File Shown in Lower Left of Google Chrome

- View file



	A	B	C	D	E	F
1	[["EEO"	EEO_LABEL	EEOALL1W_C01_001E	EEOALL1W_C01_001EA	EEOALL1W_C01_001M	EEOALL1W_C01
2	["0000"	Total, all occupations	336690	null	3146	null
3	["0010"	Top executives	2940	null	348	null
4	["0040"	Advertising, marketing, promotions, p	835	null	183	null
5	["0101"	Administrative services and facilities m	590	null	212	null
6	["0110"	Computer and information systems m	535	null	197	null
7	["0120"	Financial managers	1160	null	271	null

Figure 32: Initial View of .csv File of API Results

Step 2: Remove Special Characters

The file contains special characters for the open bracket, closed bracket, and double quotation marks. You can remove them using Excel's "Find and Replace" functionality.

- Press **Ctrl + F** and click the **Replace** tab
- Enter a double quotation mark in the Find what box: **"**
- Leave the "Replace with" box blank
- Click **Replace All**



Figure 33: Find and Replace to Remove Double Quotation Marks

- Repeat this for the open bracket: **[**

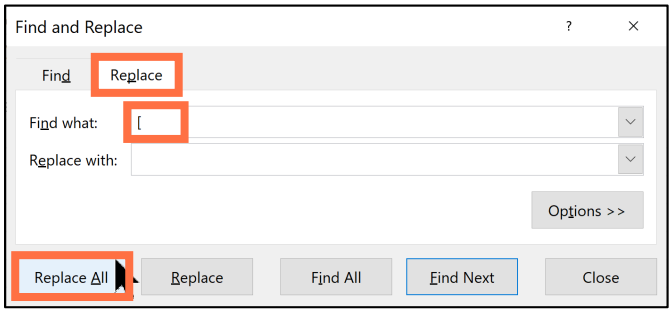


Figure 34: Find and Replace to Remove Open Brackets

- Repeat this again for the closed bracket: **]**

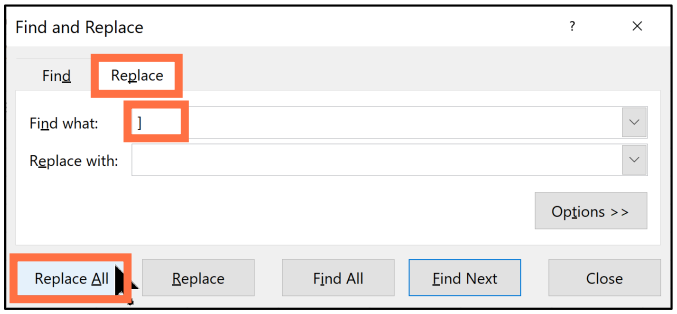
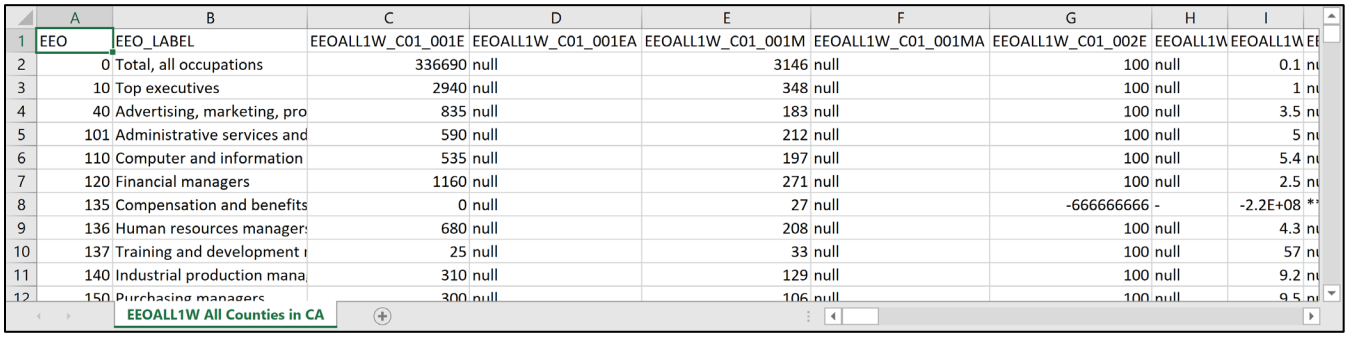


Figure 35: Find and Replace to Remove Closed Brackets

- View file with special characters removed



	A	B	C	D	E	F	G	H	I
1	EEO	EEO_LABEL	EEOALL1W_C01_001E	EEOALL1W_C01_001EA	EEOALL1W_C01_001M	EEOALL1W_C01_001MA	EEOALL1W_C01_002E	EEOALL1W	EEOALL1W
2	0	Total, all occupations	336690	null	3146	null	100	null	0.1
3	10	Top executives	2940	null	348	null	100	null	1
4	40	Advertising, marketing, pro	835	null	183	null	100	null	3.5
5	101	Administrative services and	590	null	212	null	100	null	5
6	110	Computer and information	535	null	197	null	100	null	5.4
7	120	Financial managers	1160	null	271	null	100	null	2.5
8	135	Compensation and benefits	0	null	27	null	-666666666	-	-2.2E+08
9	136	Human resources manager	680	null	208	null	100	null	4.3
10	137	Training and development	25	null	33	null	100	null	57
11	140	Industrial production mana	310	null	129	null	100	null	9.2
12	150	Purchasing managers	300	null	106	null	100	null	9.5

EEOALL1W All Counties in CA

Figure 36: File with Special Characters Removed

Step 3: Move NAME and Geography ID

When you make a request for data with API group queries, we provide the data to you by variable name in alphanumeric order. This means the fields for geography name and geography ID will appear near the end of your results.

You may move these columns to the front of your table by following these steps

- Scroll to last few columns with data
- Select the columns for **GEOID** and **NAME**
- **Right-click the selected area** and choose **Cut**

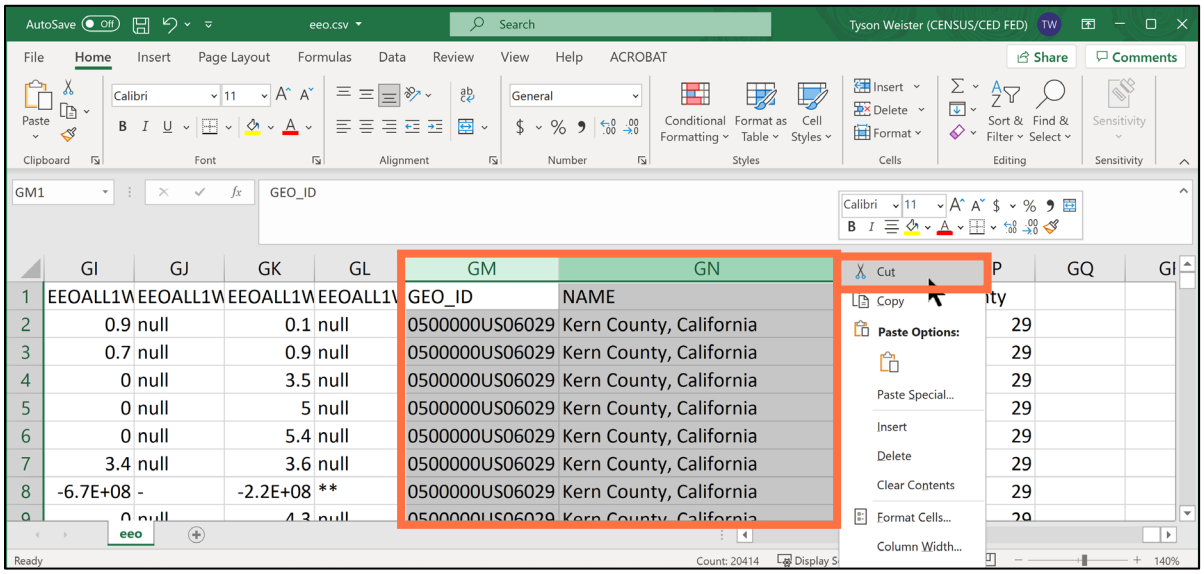


Figure 37: GEO_ID and NAME Columns Located Near the End of Spreadsheet

- **Right-click column A** and select **insert cut cells**

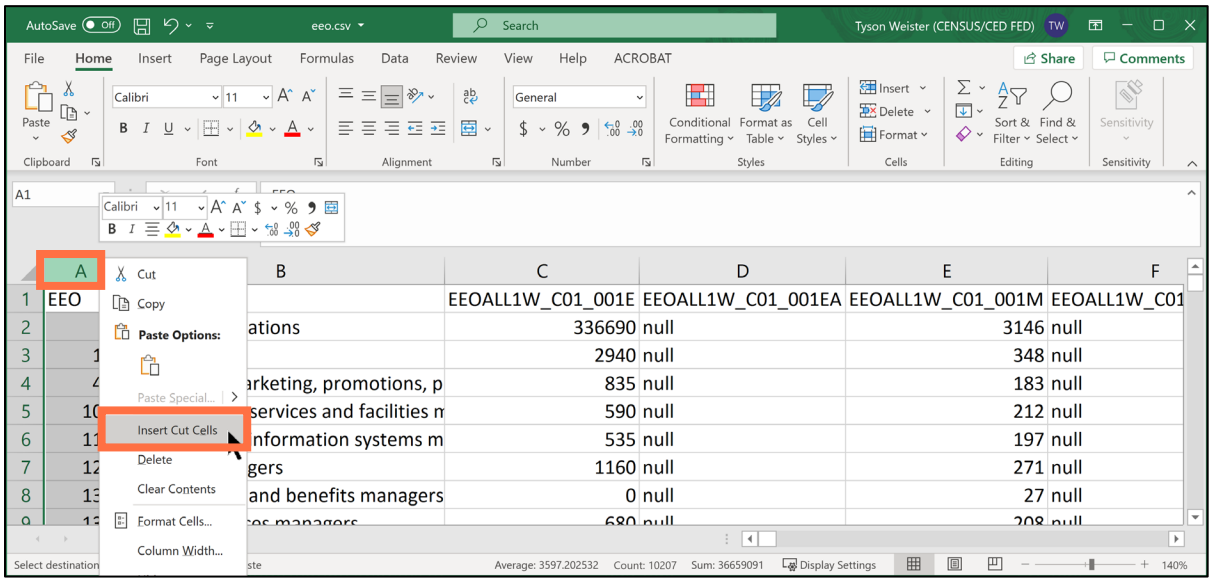


Figure 38: Insert GEO_ID and NAME into the First Columns

- View results. The table is now in a readable format with the geography names at the beginning of the file.

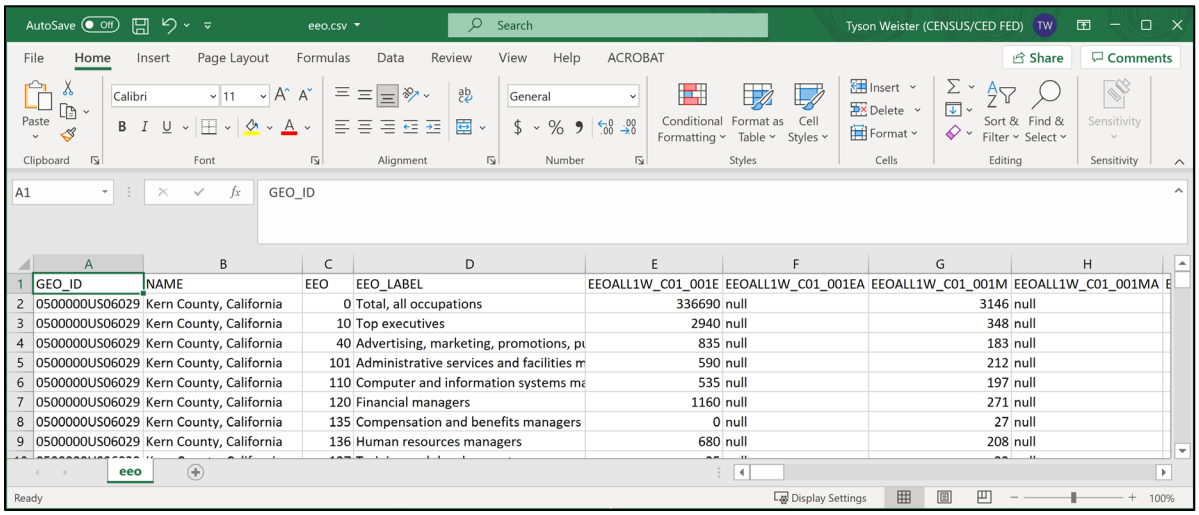


Figure 39: API Results After Formatting

Step 4: Save as Excel Workbook to Keep Changes

Save the file as an Excel Workbook in order to save all of your formatting improvements:

- Click **File** in the upper left
- Select **Save As**
- Choose **Excel Workbook** from the drop-down menu on the right
- Select **Save**

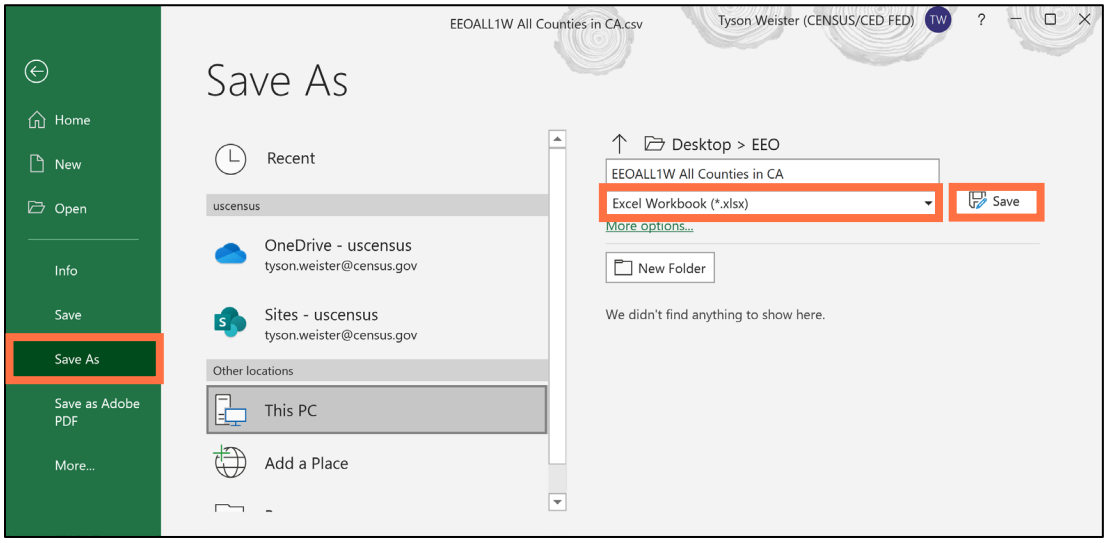
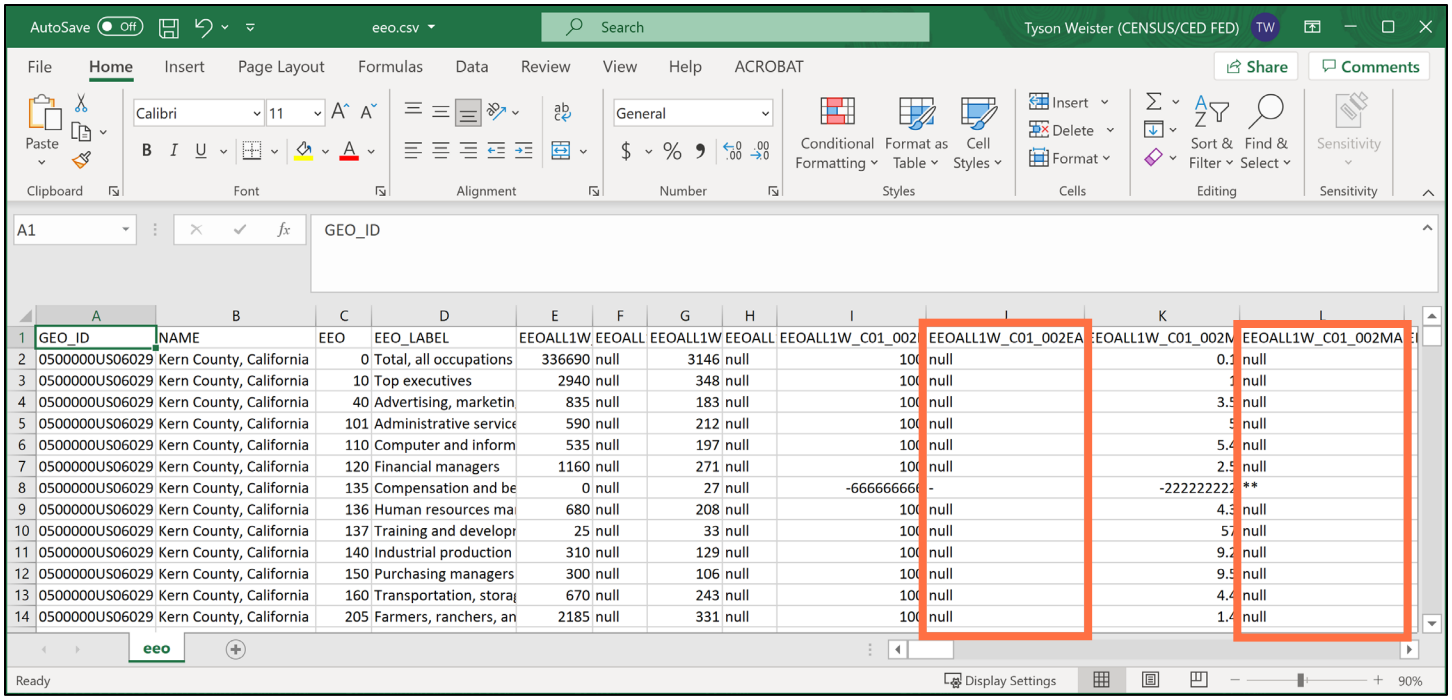


Figure 40: Save As Excel Workbook

Step 5: Understanding Annotation columns

If you used an API group call to get results for an entire table, you will notice that each variable and margin of error has a corresponding column with a similar label that ends in A, shown in the screenshot below. These columns that end in A are annotation columns that are used to denote special characters rather than numerical values. Oftentimes, they are not applicable and will contain null values, but in some cases, they will contain special values such as (X), +, or *. For a detailed listing of annotation values and descriptions, see the notes on ACS estimate and annotation values[8] webpage.

[8] https://www.census.gov/data/developers/data-sets/acs-1year/notes-on-acs-estimate-and-annotation-values.html



	A	B	C	D	E	F	G	H	I	J	K	L
1	GEO_ID	NAME	EEO	EEO_LABEL	EEOALL1W	EEOALL	EEOALL1W	EEOALL	EEOALL1W_C01_002	EEOALL1W_C01_002EA	EEOALL1W_C01_002M	EEOALL1W_C01_002MA
2	0500000US06029	Kern County, California	0	Total, all occupations	336690	null	3146	null	100	null	0.1	null
3	0500000US06029	Kern County, California	10	Top executives	2940	null	348	null	100	null	1	null
4	0500000US06029	Kern County, California	40	Advertising, marketin	835	null	183	null	100	null	3.5	null
5	0500000US06029	Kern County, California	101	Administrative service	590	null	212	null	100	null	5	null
6	0500000US06029	Kern County, California	110	Computer and inform	535	null	197	null	100	null	5.4	null
7	0500000US06029	Kern County, California	120	Financial managers	1160	null	271	null	100	null	2.5	null
8	0500000US06029	Kern County, California	135	Compensation and be	0	null	27	null	-666666666	-	-222222222	**
9	0500000US06029	Kern County, California	136	Human resources ma	680	null	208	null	100	null	4.3	null
10	0500000US06029	Kern County, California	137	Training and developr	25	null	33	null	100	null	57	null
11	0500000US06029	Kern County, California	140	Industrial production	310	null	129	null	100	null	9.2	null
12	0500000US06029	Kern County, California	150	Purchasing managers	300	null	106	null	100	null	9.5	null
13	0500000US06029	Kern County, California	160	Transportation, storag	670	null	243	null	100	null	4.4	null
14	0500000US06029	Kern County, California	205	Farmers, ranchers, an	2185	null	331	null	100	null	1.4	null

Figure 41: Examples of Annotation Variables from the API Group Call for Table EEOALL1W

If you would like to remove the annotation columns from your results in Excel, please see the Removing ACS Annotation Columns from API Group Call Results in Excel[9] flyer.

Learn More and Contact Us

To learn more about the API, please see the Census Data API User Guide[10] and the How-to Materials for Using the Census API[11] webpage.

To get answers to your API questions, please email census.data@census.gov.

Issued April 2022

[9] https://www2.census.gov/data/api-documentation/removing-acs-annotation-columns-from-api-group-call-results-in-excel.pdf
[10] https://www.census.gov/data/developers/guidance/api-user-guide.html
[11] https://www.census.gov/data/what-is-data-census-gov/guidance-for-data-users/how-to-materials-for-using-the-census-api.html