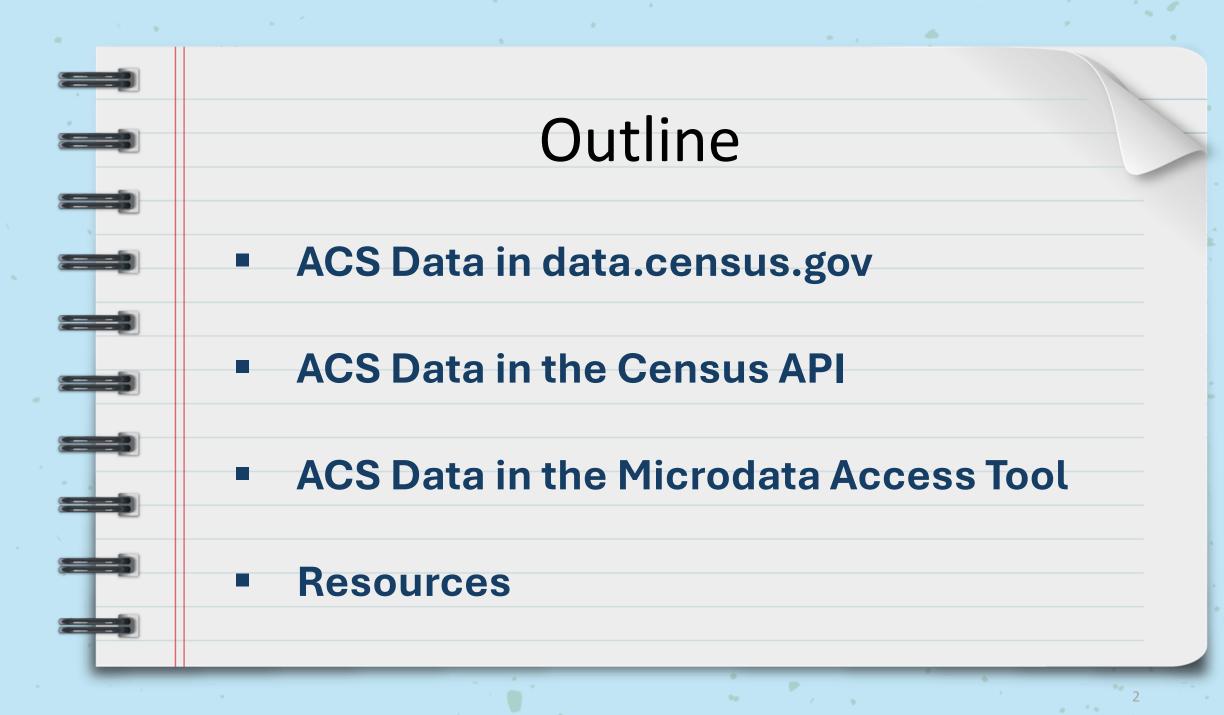
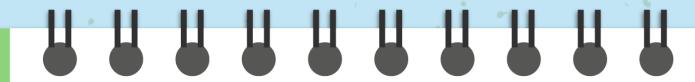
Finding American Community Survey Data

Dissemination Outreach Branch

Center for Enterprise Dissemination

U.S. Census Bureau





ACS Data in data.census.gov

Data on data.census.gov

General Data Availability:

- Decennial Census: 2000present
- Population Estimates
 Program: Limited tables
 starting with one from the
 2019 vintage
- American Community Survey (ACS): 2010-2023
- Econ Census and Selected Surveys: 2012-present

	2000	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	202
ACS 1-Year Detailed Tables		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
ACS 1-Year Data Profiles		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
ACS 1-Year Comparison Profiles		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
ACS 1-Year Subject Tables		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
ACS 1-Year Selected Population Profiles		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
ACS 5-Year American Indian and Alaska Native Tables		✓					✓						✓		
ACS 5-Year Selected Population Tables		✓					✓						✓		
ACS 5-Year Detailed Tables		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
ACS 5-Year Data Profiles		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	√
ACS 5-Year Comparison Profiles							✓	✓	✓	✓	✓	✓	✓	✓	✓
ACS 5-Year Subject Tables		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	~
ACS 5-Year Equal Employment Opportunity										✓					
ACS Supplemental Estimates						✓	✓	✓	✓	✓	✓		✓	✓	~
ACS 1-Year Supplemental Data Profiles for Congressional Redistricting															~
Community Resilience Estimates											✓				
Decennial Demographic Profile												✓			
Decennial Demographic and Housing Characteristics File (DHC)												1			
Detailed Demographic and Housing Characteristics File A (Detailed DHC-A)												✓			
Detailed Demographic and Housing Characteristics File B (Detailed DHC-B)												✓			
Supplemental Demographic and Housing Characteristics File (S-DHC)												✓			
Decennial Summary File 1 (SF1), Summary File 2 (SF2)	✓	✓													
Decennial Summary File 3 (SF3), Summary File 4 (SF4)	✓														
Decennial Summary File 2 (SF2), Summary File 3 (SF3), File 4 (SF4) Demographic Profile	✓														
Decennial National Redistricting Data		✓													
Decennial Redistricting Data (PL 94-171)	✓	✓										✓			
Decennial American Indian and Alaska Native Demographic Profile	✓														
Decennial American Samoa, Guam, Northern Mariana Island, and U.S. Virgin Islands												✓			

The American Community Survey

Content Overview

	HOUSING			
 Social Ancestry Citizenship Status Citizen Voting-Age Population Disability Status Educational Attainment Fertility Grandparents as Caregivers 	POPULATION Economic Class of Worker Commuting and Place of Work Employment Status Food Stamps (SNAP) Health Insurance Coverage	 Demographic Age Group Quarters Population Hispanic or Latino Origin Race Relationship to Householder Sex 	 Bedrooms Computer & Internet Us Costs (Mortgage, Rent, Insurance) Electric Vehicles House Heating Fuel Kitchen/Plumbing Facil Occupancy/Vacancy St Occupants per Room 	
 Language Spoken at Home Marital History and Status Migration/Residence 1 Year Ago Place of Birth School Enrollment Undergraduate Field of Degree Veterans Status; Period of Military Service Year of Entry 	 Income and Earnings Industry and Occupation Poverty Status Weeks Worked Last Year 	• Total Population	 Rooms Solar Panels Telephone Service Avail Tenure (Owner/Renter) Units in Structure Value of Home Vehicles Available Year Householder Move Unit Year Structure Built 	

- Jse
- , Taxes,
- cilities
- Status
- ailable
- ved Into

ACS Data in data.census.gov

Group Exercises

 Commuting characteristics tables for all counties in New Jersey – Advanced Search

 Veteran status tables for all Census Tracts in Atlanta, Georgia – Advanced Search

- Income to poverty ratio for Iowa Single Search
- Monthly housing costs for owner occupied housing units with a mortgage in Virginia – Single Search

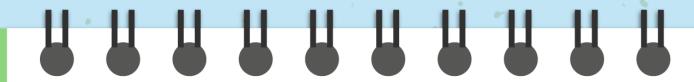


ACS Data in data.census.gov

Individual Exercises

- Search using a word or phrase
 - Tenure by vehicles available for Chicago, Illinois
 - Hints:
 - Use the Single Search think about the keywords needed for this search, i.e. using 'vehicles available Chicago'
 - Use table B25044 from the 2023 ACS 1-Year Estimates
- Search using filters
 - Median earnings for Chippewa County, Minnesota
 - Hints:
 - Use the Advanced Search
 - Earnings (Individuals) can be found under the Income and Poverty filter
 - Use table S2001 from the 2023 ACS 5-Year Estimates





ACS Data in the Census API

Census Data API

Census Data API

 Data service that allows software developers and other users to access public data in a standardized way

Uses:

- Supports mobile and web applications (internal and external)
- Drives interactive data visualizations
- Connects to statistical analysis software like SAS and R

Advantages:

- Access only the variables and geographies needed
- Immediate access to updates
- No need to host data on another server
- More data than what is available on data.census.gov

Why would you use the API?

* Want older data not available on data.census.gov, such as pre-2010 ACS

* Want to gather a lot of data at once (usually involves use of third-party software)

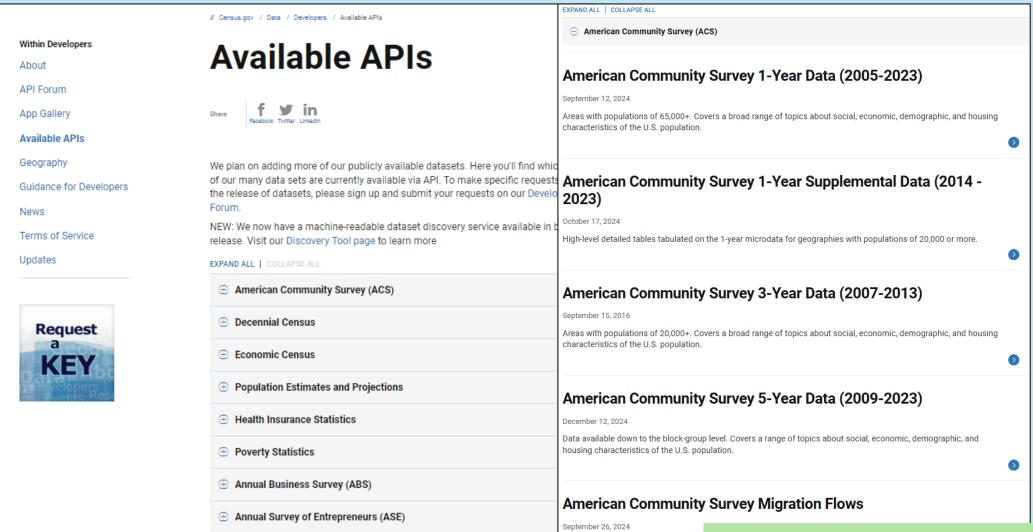
* Problems pulling data from data.census.gov

* Pull data for multiple tables at once, rather than viewing individual tables on data.census.gov

* Using Census data to create your own application or visualization



Available APIs Page



Provides the same information found in the Discovery Tool, but in an easier to read format

Available APIs Page

https://www.census.gov/data/developers/data-sets.html

What is an endpoint?

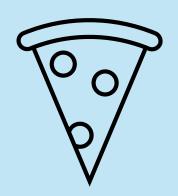
It can be considered a URL path for accessing a specific dataset.

https://api.census.gov /data/2023/acs/acs5

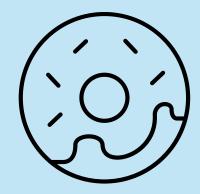
https://api.census.gov /data/2020/dec/pl

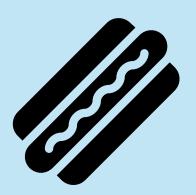
https://api.census.gov /data/2017/ecnbasic













Different Endpoints for the Same Program or Survey

All these different endpoints exist for the American Community Survey.

American Community Survey 1-Year Data	https://api.census.gov/data/2023/acs/acs1
American Community Survey 1-Year Supplemental Data	https://api.census.gov/data/2023/acs/acsse
American Community Survey 3-Year Data	https://api.census.gov/data/2013/acs/acs3
American Community Survey 5-Year Data	https://api.census.gov/data/2023/acs/acs5
American Community Survey Migration Flows	https://api.census.gov/data/2022/acs/flows

Please note that the year found in the endpoint will change according to the year of data you are looking at.



Unique Endpoints Within the ACS 1-Year and 5-Year Estimates

API Dataset	Table ID Begins with	API Call Begins with
Detailed Tables	B or C	api.census.gov/data/2023/acs/acs1
Data Profiles	DP	api.census.gov/data/2023/acs/acs1/profile
Comparison Profiles	СР	api.census.gov/data/2023/acs/acs1/cprofile
Selected Population Profiles	S0201, S0201PR	api.census.gov/data/2023/acs/acs1/spp
Subject Tables	S	api.census.gov/data/2023/acs/acs1/subject

API Dataset	Table ID Begins with	API Call Begins with
Detailed Tables	B or C	api.census.gov/data/2023/acs/acs5
Data Profiles	DP	api.census.gov/data/2023/acs/acs5/profile
Comparison Profiles	СР	api.census.gov/data/2023/acs/acs5/cprofile
Subject Tables	S	api.census.gov/data/2023/acs/acs5/subject



Unique Endpoints Within the ACS 1-Year and 5-Year Estimates



https://api.census.gov/data/2023/acs/acs5?get=NAME,B27001_001E,DP05_0001E&for=us:1





https://api.census.gov/data/2023/acs/acs5?get=NAME,B27001_001E&for=us:1

https://api.census.gov/data/2023/acs/acs/profile?get=NAME,DP05_0001E&for=us:1

```
← → C ♠ 25 api.census.gov/data/2023/acs/acs5?get=NAME,B27001_001E&for=us:1

Pretty-print □

[["NAME","B27001_001E","us"],
["United States","327425278","1"]]

← → C ♠ 25 api.census.gov/data/2023/acs/acs5/profile?get=NAME,DP05_0001E&for=us:1

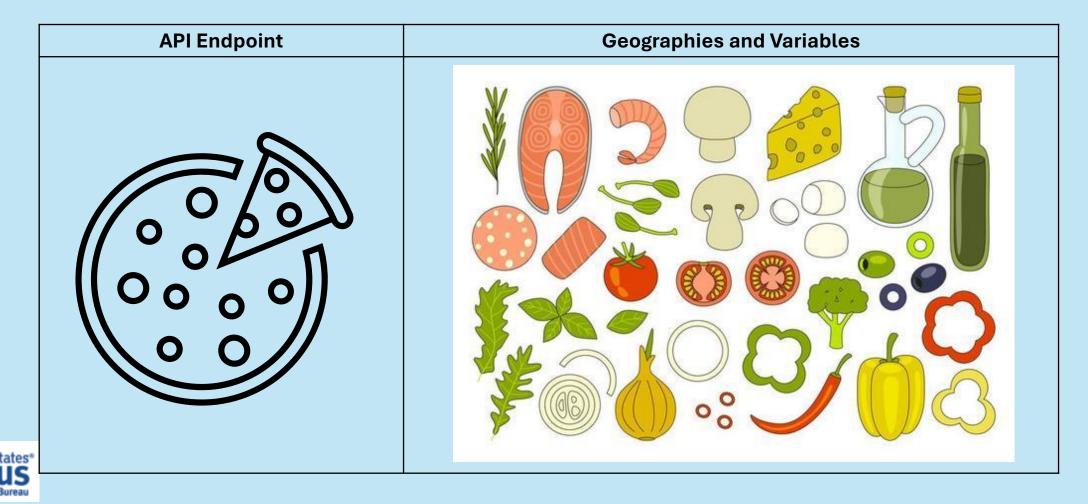
Pretty-print □

[["NAME","DP05_0001E","us"],
["United States","332387540","1"]]
```



API Query Structure

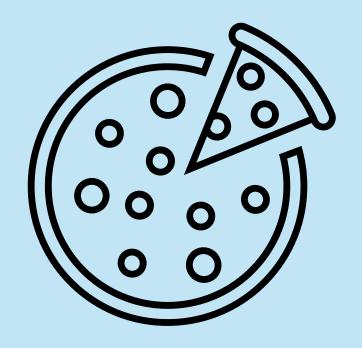
https://api.census.gov/data/2023/acs/acs5?get=NAME,B27001_001E&for=us:1



API Query Structure: Endpoint

https://api.census.gov/data/2023/acs/acs5?get=NAME,B27001_001E&for=us:1

This endpoint indicates that the specific dataset being used is the 2023 ACS 5-year Detailed Tables.





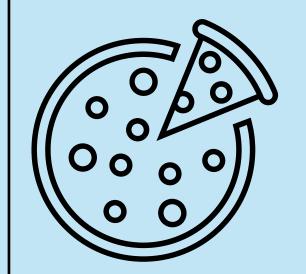
API Query Structure: Variables or Group

https://api.census.gov/data/2023/acs/acs5?get=NAME,B27001_001E&for=us:1

The **?get=** portion is where you can specify the individual variables or the table that you want.

Using the **NAME** variable means that you will receive the name of the geography written out (e.g., "United States" or "New York city, New York").

Adding the **B27001_001E** variable means that we will get data for the first estimate in table B27001, which is the Total number of people in the civilian noninstitutionalized population.



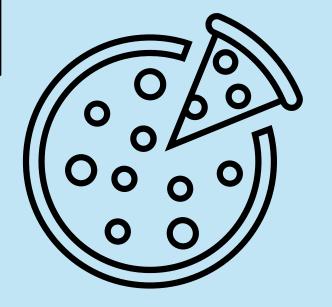




API Query Structure: Geography

https://api.census.gov/data/2023/acs/acs5?get=NAME,B27001_001E&for=us:1

The **&for=** portion indicates the geography being used.







API Query Structure

https://api.census.gov/data/2023/acs/acs5?get=NAME,B27001_001E&for=us:1

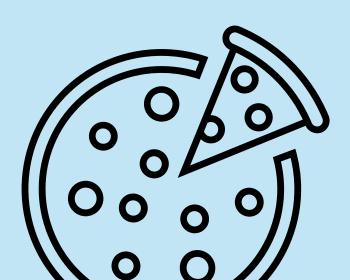




API Endpoint

Geographies and Variables

https://api.census.gov/data/2023/acs/acs5



?get=NAME, B27001_001E





?get=NAME, B01001C_001E





&for=place:*&in=state:*

?get=NAME, B19001_015E







ACS Data in the Census API

Group Exercises

- Single estimate for multiple geographies (American Community Survey 1-Year Estimates)
 - How can I find the unemployed population for all states in the U.S.?
- Groups functionality (American Community Survey 5-Year Estimates)
 - How can I access commuting data for all counties in the U.S.?

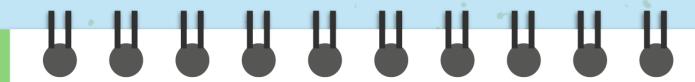
ACS Data in the Census API

Individual Exercises

 Females 15 years and over who have never been married in South Carolina

Hints:

- Use the 2023 ACS 1-Year API
- Use the Data Profile Variables and Example API calls
- Use the first example query under the 'state' section
- Once you find the variable code for females 15 years old and over who have never been married, add it to the example query
 - Add the variable after the NAME variable & separate the variables with a comma (,)
- Optional: You can also edit the query to only display data for one state by changing the asterisk (*) to the FIPS code for South Carolina



ACS Data in the Microdata Access Tool

What is the ACS Public Use Microdata Sample?

Public Use Microdata Sample

Anonymized

- No personally identifiable information
- Edits to protect confidentiality

Individual Responses

 Must be tabulated and weighted by user

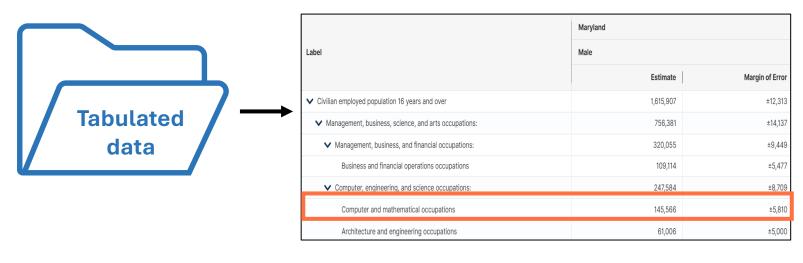
Smaller Number of Responses

 Data represents about twothirds of the responses collected in the ACS

Accessible

- data.census.gov/mdat
- Application Programming Interface (API)
- Download through FTP sites

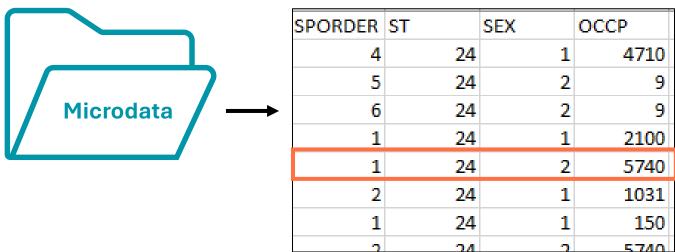
Tabulated Data vs. Microdata: What's the Difference?



data.census.gov

Aggregated tables for a geography:

"In 2023 in Maryland, approximately 145,566 males worked in computer and mathematical occupations."



Microdata Access Tool (MDAT)

Microdata (a set of edited survey responses):

"This male in Maryland is a web developer."

Available Geographies in the ACS PUMS

ACS Available Geographies

Nation

Region

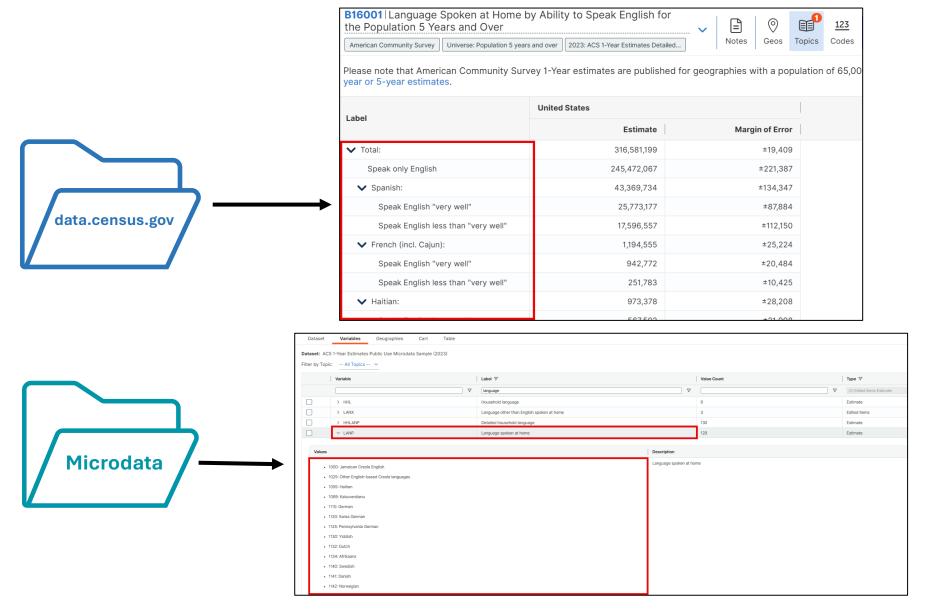
Division

State

Public Use Microdata Area (PUMA)



ACS Data in data.census.gov vs. MDAT



data.census.gov

High level language categories

Only 43 categories (some of which combine languages) are included in table B16001.

Microdata Access Tool (MDAT)

Detailed language categories by variable

All language spoken at home values are listed in the LANP variable.

Creating a Table in MDAT using ACS data

Group Exercises

- Earnings by race for all states in the U.S.
- Hispanic origin and sex by single year of age for the U.S.



Creating a Table in MDAT using ACS Data

Individual Exercises

Detailed language spoken at home by sex for California

Hints:

- Use the 2023 ACS 1-Year PUMS
- Use the Label search bar to find the two variables (LANP and SEX)
- Put the Selected Geographies and Sex in the Columns and Language Spoken at Home in the Rows





Resources

Stay Connected

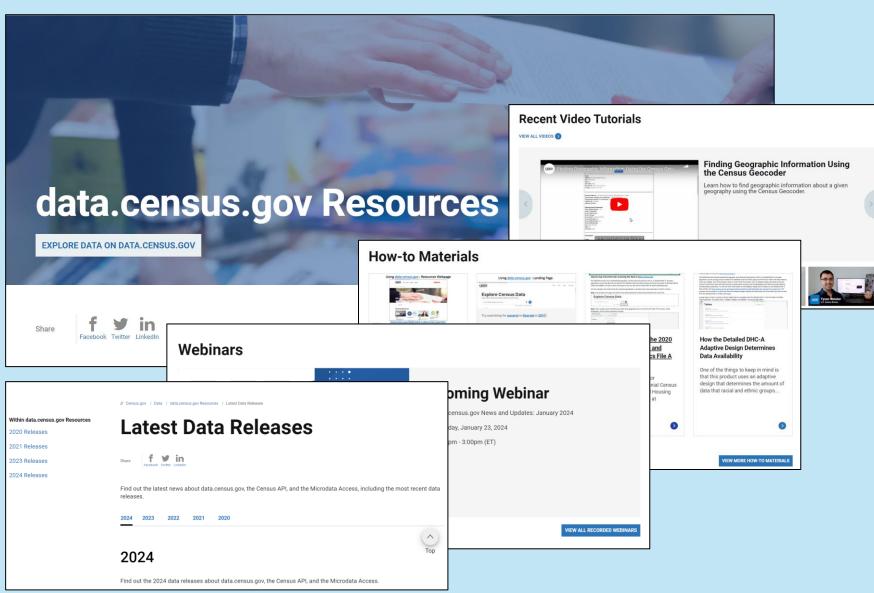
data.census.gov Resources page:

census.gov/data/what-is-data-census-gov.html

Feedback: Email comments to census.data@census.gov

data.census.gov Training Requests:

ced.cedsci.outreach@census.gov



Additional ACS Resources

ACS Program Page:

census.gov/acs

Join the ACS Data Users Group:

https://acsdatacommunity.prb.org/

ACSO Contact Information:

acso.users.support@census.gov



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American Community Survey (ACS)

The American Community Survey (ACS) helps local officials, community leaders, and businesses understand the changes taking place in their communities. It is the premier source for detailed population and housing information about our nation.



Featured

Respond to the ACS

Learn the different ways to respond to the Ame online, by phone, by email. Read our FAQs or ca survey.

American Community Surv

The American Community Survey releases new estimates, in a variety of tables, tools, and anal

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Why We Ask Each Question

ACS Data Stories

ACS Information Guide

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About the American Community Survey

What is the American Community Survey?

The American Community Survey (ACS) is an ongoing survey that provides vital information on a yearly basis about our nation and its people. Information trillions of dollars in federal funds are distributed

from the survey generates data that help inform how

Through the ACS, we know more about jobs and occupations, educational attainment, veterans, whether people own or rent their homes, and other topics Public officials, planners, and entrepreneurs use this information to assess the past and plan the future. When you respond to the ACS, you are doing your part to help your community plan for hospitals and schools, support school lunch programs, improve emergency services, build bridges, and inform businesses looking to add jobs and expand to new markets, and more.



Related Information



About the Puerto Rico Community Survey

Learn about a customized version of the American Community Survey that provides data every year for Puerto Rico communities.

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ACS and the Decennial Census



How-To Materials for Microdata Access

Resources Link:

https://www.census.go v/data/what-is-datacensus-gov/guidancefor-data-users/how-tomaterials-for-usingthe-microdataaccess.html

Includes:

- PDFs
- Recorded Webinars
- Video Tutorials
- Data Availability
- Data Dictionaries



How-To Materials for the Census API

Resources Link:

https://www.census.gov /data/what-is-datacensus-gov/guidancefor-data-users/how-tomaterials-for-using-thecensus-api.html

API User Guide:

https://www.census.gov /data/developers/guida nce/api-user-guide.html

Includes available data, core concepts, and example API queries

Within Guidance for Data Users

Frequently Asked Questions

How-to Materials for Using data.census.gov

How-to Materials for Using the Census API

How-to Materials for Using the Microdata Access

Video Tutorials

Webinars

How-to Materials for Using the Census API

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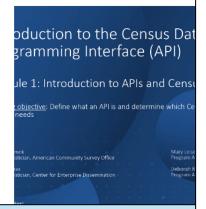




Do you have questions on how to use the Census API? Check out our step-by-step guidance to learn how to use the Census

// Census.gov / Data / Developers / Guidance for Developers / Census Data API User Guide

API to find the data you need. To learn API Developers page.



Census Data API User Guide

January 14, 2021

f 💆 in



The purpose of this user guide is to instruct developers and researchers on how to use the Census Data Application Programming Interface (API) to request data from U.S. Census Bureau datasets

Related Information

DATA TOOL **Explore Census Data**

How-to Materials for Using the Census

Download Census Data API User Guide [PDF - <1.0 MB]

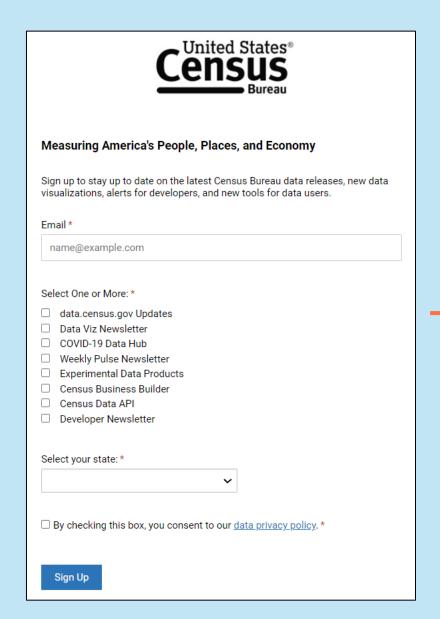
Core Concepts Example API Oueries

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Get data.census.gov updates delivered to your inbox!

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15450





Data.census.gov Newsletter - February 2025



In January, we introduced a few updates to enhance your experience on data.census.gov. These updates are a part of our ongoing efforts to make the site easier to use and more efficient, incorporating valuable feedback from our users.

What's New?

For the Microdata Access Tool (MDAT), we've introduced a few enhancements:

- New "Delete All Variables" Button: In the cart tab, you'll now find a button that allows you to quickly delete all selected variables.
- Improved Continuous Variable

Featured Video Tutorial

Mapping 2020 Census Supplemental DHC Data on data.census.gov



Learn how to map data from the 2020 Census Supplemental Demographic and Housing Characteristics File on data.census.gov.

More Videos

Featured Question

How Do I Navigate Between Different Pages?

Navigating

More data.census.gov Workshops

Register at

https://www.census.gov/data/whatis-data-census-gov/workshops.html

data.census.gov Workshops









These participatory classes walk you through examples of using data.census.gov to find demographic and economic data.

Time is allotted throughout the training for questions, and participation is strongly encouraged.

- Please click the box below to view available classes.
- Registration is required to attend these workshops. Attendance is limited to 50 participants per session.

***When registering, if you receive a message that you are waitlisted, please sign up for later class. We are trying to move classes to Waitlist as they fill, but sometimes there is a lag in that update.

Basics of Finding Data Using data.census.gov

In these participatory classes, data.census.gov outreach staff walk you through examples that cover basics and advanced of using data.census.gov to find data. 🕤

Advanced Usage of data.census.gov

These participatory classes walk you through some of the more advanced ways to use data.census.gov to find demographic and economic data.

Making the Most of Mapping in data.census.gov

Join us in this participatory class as we look at mapping capabilities in data.census.gov.

➂

Basics of Using the Microdata Access Tool in data.census.gov

Join us for a participatory class that walks you through the Microdata Access Tool (MDAT) within data.census.gov.

Basics of Using the Census API

Join us in this hands-on class as we learn how to access data through the Census Data Application Programming Interface

Data.census.gov Geography Essentials for Beginners

This introductory workshop is geared towards data users who want to master the fundamentals of census geographies.



Finding American Community Survey Data

In this participatory class, our staff will walk you through various ways of accessing data from the ACS via three of our data tools.

3

Finding Economic Data on data.census.gov and the API

This workshop is geared towards intermediate/advanced data.census.gov users who want to learn how to access economic datasets on data.census.gov and the API.



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