

Using the Census Bureau Application Programming Interface (API) with the American Community Survey (ACS)

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The American Community Survey Outline

- **Census API Basics**
- Using the API
- API Tutorial and Examples
- Resources for learning more

The American Community Survey

The Census Bureau API

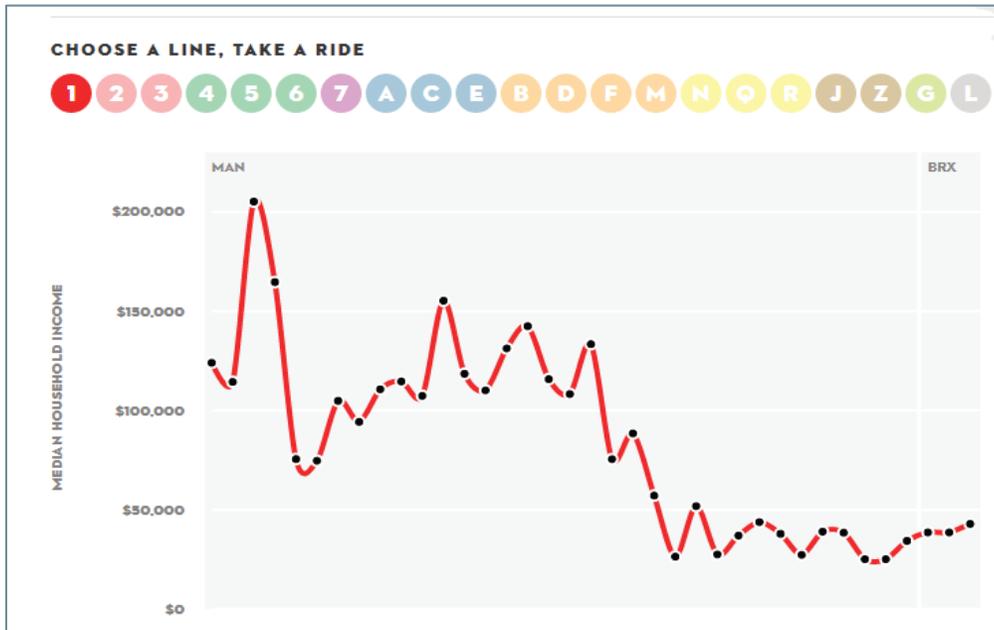
- The Census Bureau Application Programming Interface (API)
 - Data service which enables **Census Bureau programs** to provide data in a standardized way and hosted from a central location
 - Gives **software and web developers** the ability to create and easily update custom applications
 - Allows **data scientists** to have more direct access to data in order to conduct analyses

The American Community Survey

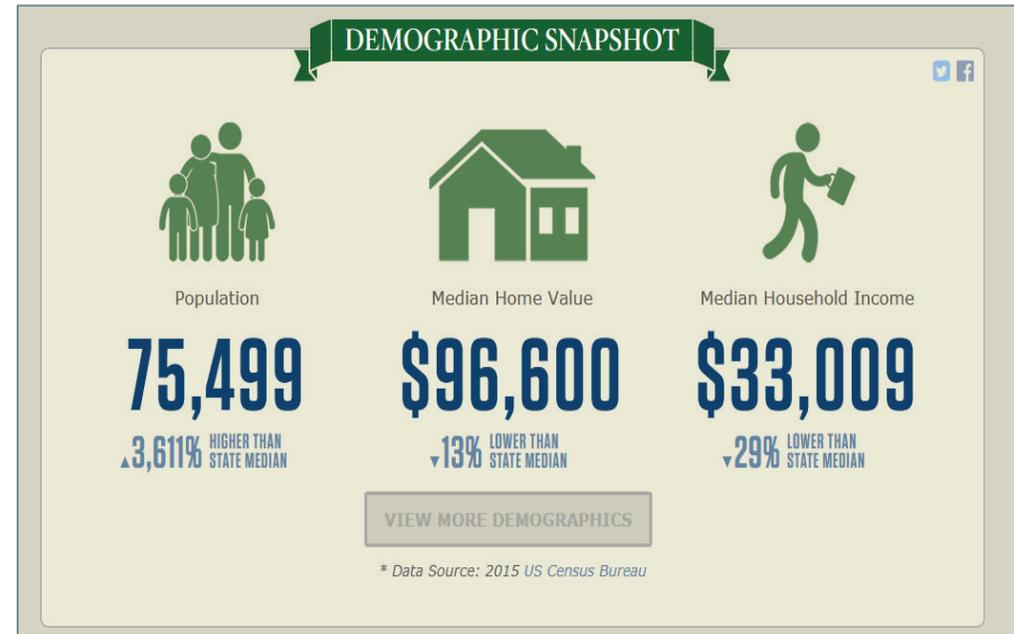
API Advantages

- Uses of the Census Bureau API include:
 - Supporting mobile and web applications
 - Drives interactive data visualizations
 - Connects to statistical analysis software like R
 - Pull data from different tables

The American Community Survey Application Programming Interface (API)



[Source: The New Yorker](#)



[Source: ClearGov](#)



Explore Census Data

The Census Bureau is the leading source of quality data about the nation's people and economy.

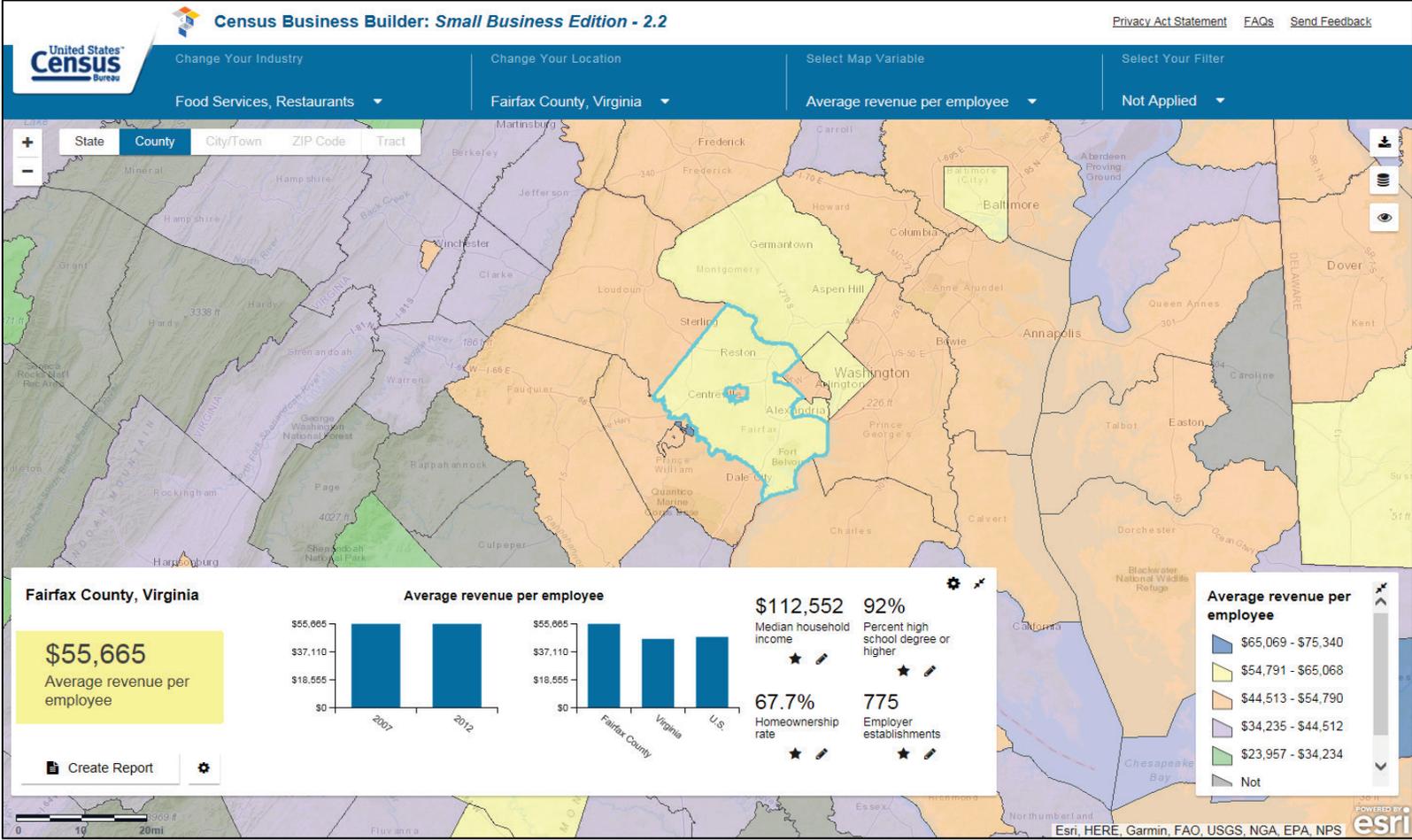
[Advanced Search](#)

Send Feedback

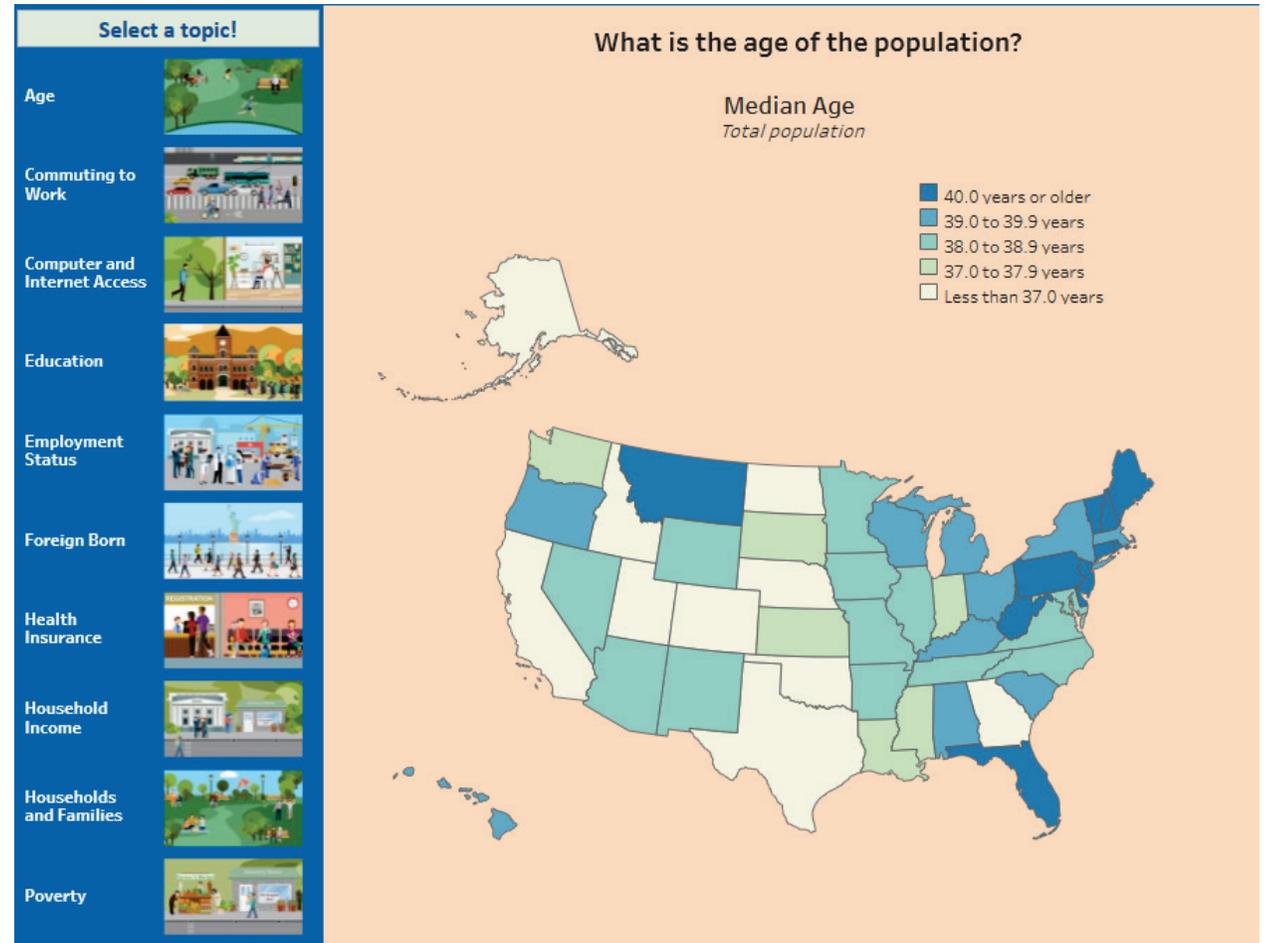
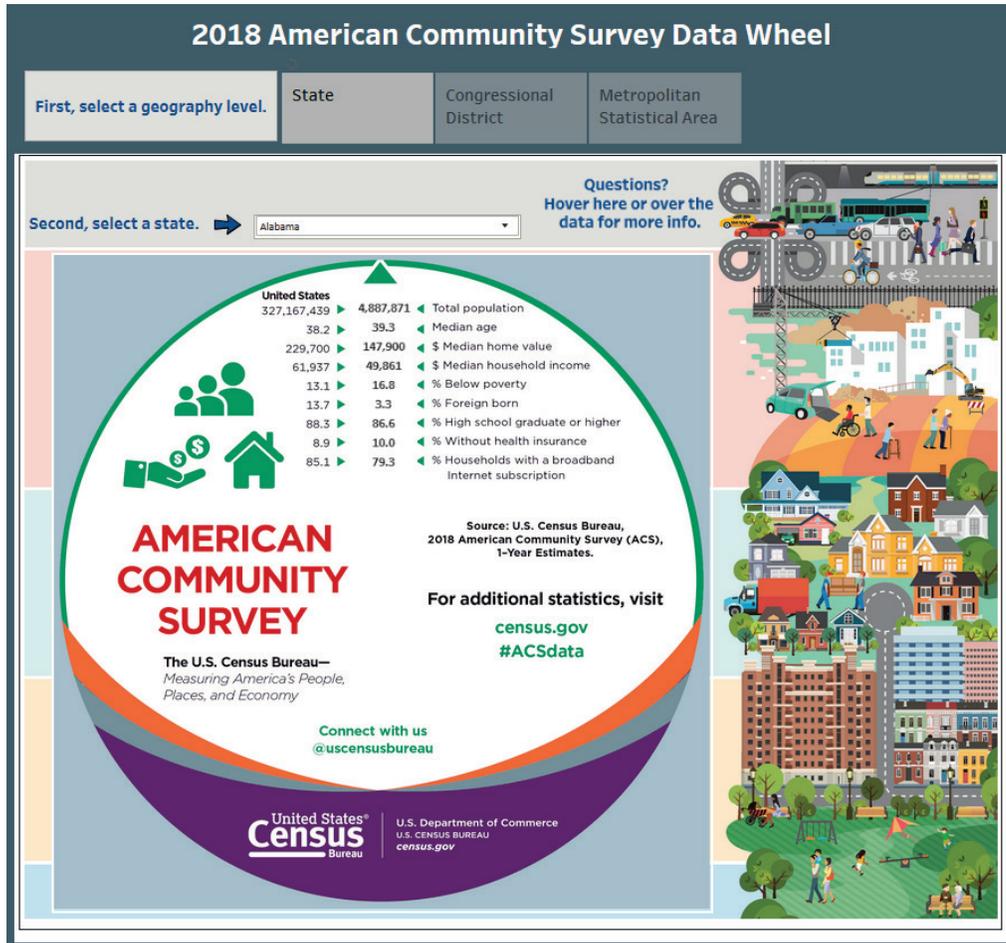
cedsci.feedback@census.gov



The American Community Survey Census Business Builder



The American Community Survey Census API and Data Visualizations



The American Community Survey Outline

- Census API Basics
- **Using the API**
- API Tutorial and Examples
- Resources for learning more

The American Community Survey

What is the Margin of Error (MOE)?

Definition: An MOE is a measure of the possible variation of the estimate around the population value

- At a given confidence level, the estimate and actual population value will differ by no more than the MOE
- 90% confidence level is the Census standard and ACS MOEs are provided in the same unit as the estimate

Example: How many males under age 5 live in WY?

$$\text{Lower bound} = 19,649 - 310 = 19,339$$

$$\text{Upper bound} = 19,649 + 310 = 19,959$$

We are 90% confident the true number of males under age 5 in Wyoming falls **between 19,339 and 19,959**

	Wyoming	
	Estimate	Margin of Error
Total:	579,679	*****
Male:	295,561	+/-598
Under 5 years	19,649	+/-310
5 to 9 years	19,198	+/-638
10 to 14 years	20,703	+/-632
15 to 17 years	11,500	+/-304
18 and 19 years	8,105	+/-322

The American Community Survey

Tables and Profiles in API

Tables

Types in API

- **Detailed Tables (B or C)**
- **Subject Tables (S)**

Description

- Most detailed ACS statistics
- Each table covers one primary topic
- May contain cross tabulations

Profiles

Types in API

- **Data Profiles (DP)**
- **Comparison Profiles (CP)** - includes statistical significance

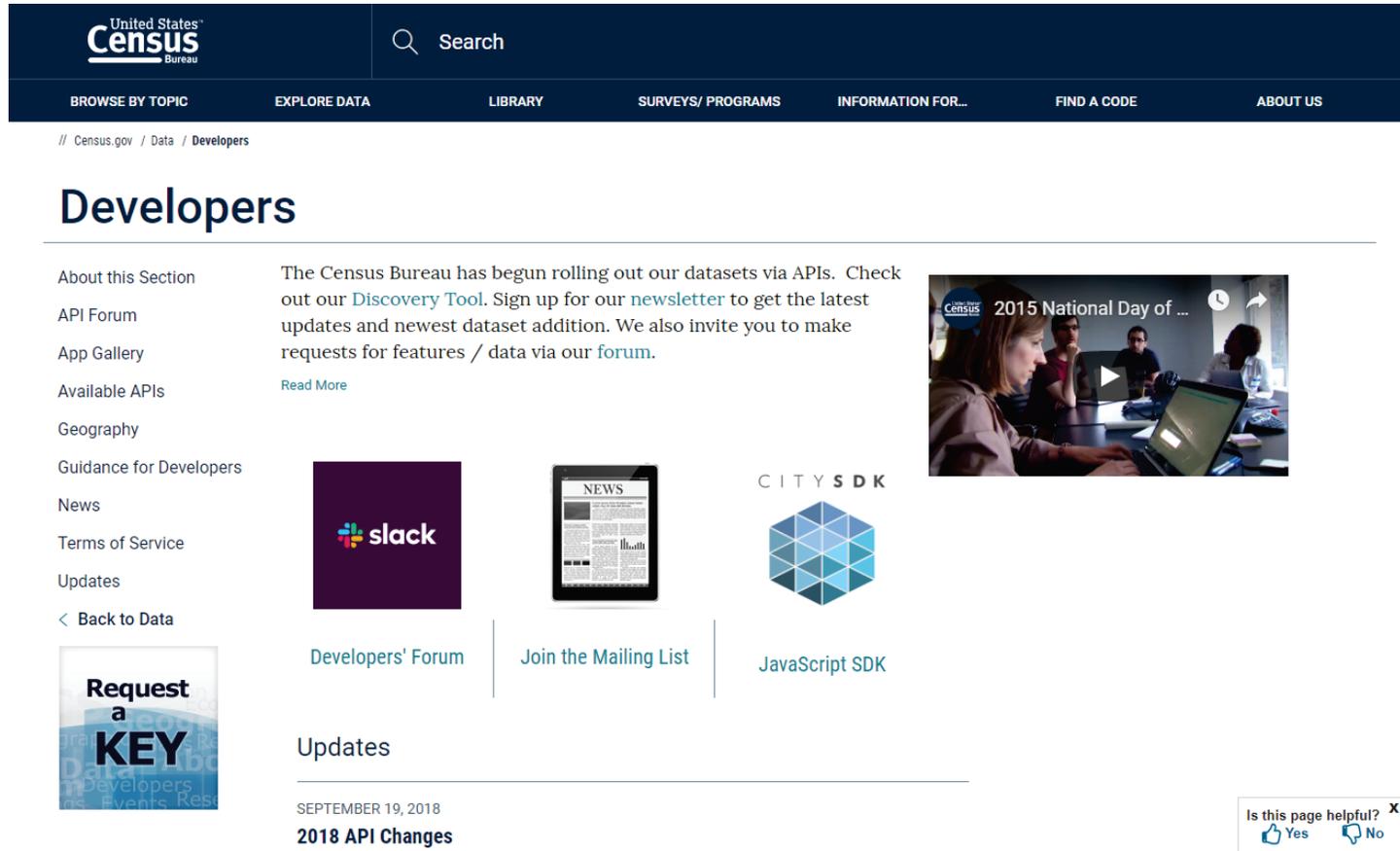
Description

- Most common ACS statistics
- Derived from tables
- Each profile covers many topics

[census.gov/programs-surveys/acs/guidance/which-data-tool/table-ids-explained.html](https://www.census.gov/programs-surveys/acs/guidance/which-data-tool/table-ids-explained.html)

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Census Developers' Page



The screenshot shows the top navigation bar of the Census Bureau website with the logo and a search bar. Below the navigation bar are links for 'BROWSE BY TOPIC', 'EXPLORE DATA', 'LIBRARY', 'SURVEYS/ PROGRAMS', 'INFORMATION FOR...', 'FIND A CODE', and 'ABOUT US'. The breadcrumb trail reads '// Census.gov / Data / Developers'. The main heading is 'Developers'. On the left is a sidebar with links: 'About this Section', 'API Forum', 'App Gallery', 'Available APIs', 'Geography', 'Guidance for Developers', 'News', 'Terms of Service', 'Updates', and '< Back to Data'. The main content area features a paragraph about API datasets, a 'Read More' link, and three cards: 'Developers' Forum' with a Slack logo, 'Join the Mailing List' with a newspaper icon, and 'JavaScript SDK' with a 'CITY SDK' logo. A video player shows '2015 National Day of ...'. Below is an 'Updates' section with a link for '2018 API Changes' dated 'SEPTEMBER 19, 2018'. A 'Request a KEY' graphic is also visible. A feedback box asks 'Is this page helpful?' with 'Yes' and 'No' options.

census.gov/developers

The American Community Survey

ACS 1-Year Products in the API

Census Data API: /data/2018/acs: x +

api.census.gov/data/2018/acs/acs1.html

Census API: Datasets in /data/2018/acs/acs1 and its descendants

Title	Description	Vintage	Dataset Name	Geography List	Variable List	Group List	Tag List	Examples	Developer Documentation	API Base URL
American Community Survey: 1-Year Estimates: Detailed Tables 1-Year	The American Community Survey (ACS) is an ongoing survey that provides data every year -- giving communities the current information they need to plan investments and services. The ACS covers a broad range of topics about social, economic, demographic, and housing characteristics of the U.S. population. Much of the ACS data provided on the Census Bureau's Web site are available separately by age group, race, Hispanic origin, and sex. Summary files, Subject tables, Data profiles, and Comparison profiles are available for the nation, all 50 states, the District of Columbia, Puerto Rico, every congressional district, every metropolitan area, and all counties and places with populations of 65,000 or more. Detail Tables contain the most detailed cross-tabulations published for areas 65k and more. The data are population counts. There are over 31,000 variables in this dataset.	2018	acs > acs1	geographies	variables	groups	tags	examples	documentation	https://api.census.gov/data/2018/acs/acs1
American Community Survey: 1-Year Estimates: Comparison Profiles 1-Year	The American Community Survey (ACS) is an ongoing survey that provides data every year -- giving communities the current information they need to plan investments and services. The ACS covers a broad range of topics about social, economic, demographic, and housing characteristics of the U.S. population. Much of the ACS data provided on the Census Bureau's Web site are available separately by age group, race, Hispanic origin, and sex. Summary files, Subject tables, Data profiles, and Comparison profiles are available for the nation, all 50 states, the District of Columbia, Puerto Rico, every congressional district, every metropolitan area, and all counties and places with populations of 65,000 or more. Comparison profiles are similar to data profiles but also include comparisons with past-year data. The current year data are compared with each of the last four years of data and include statistical significance testing. There are over 1,000 variables in this dataset.	2018	acs > acs1 > cprofile	geographies	variables	groups	N/A	examples	documentation	https://api.census.gov/data/2018/acs/acs1/cprofile
ACS 1-Year Profile Tables	The American Community Survey (ACS) is an ongoing survey that provides data every year -- giving communities the current information they need to plan investments and services. The ACS covers a broad range of topics about social, economic, demographic, and housing characteristics of the U.S. population. Much of the ACS data provided on the Census Bureau's Web site are available separately by age group, race, Hispanic origin, and sex. Summary files, Subject tables, Data profiles, and Comparison profiles are available for the nation, all 50 states, the District of Columbia, Puerto Rico, every congressional district, every metropolitan area, and all counties and places with populations of 65,000 or more. Data profiles contain broad social, economic, housing, and demographic information. The data are presented as population counts and percentages. There are over 1,000 variables in this dataset.	2018	acs > acs1 > profile	geographies	variables	groups	N/A	examples	documentation	https://api.census.gov/data/2018/acs/acs1/profile
American Community Survey: 1-Year Estimates: Selected Population Profiles	The American Community Survey (ACS) is an ongoing survey that provides data every year -- giving communities the current information they need to plan investments and services. The ACS covers a broad range of topics about social, economic, demographic, and housing characteristics of the U.S. population. Much of the ACS data provided on the Census Bureau's Web site are available separately by age group, race, Hispanic origin, and sex. Summary files, Subject tables, Data profiles, and Comparison profiles are available for the nation, all 50 states, the District of Columbia, Puerto Rico, every congressional district, every metropolitan area, and all counties and places with populations of 65,000 or more. Selected Population Profiles provide broad social, economic, and housing profiles for a large number of race, ethnic, ancestry, and country/region of birth groups. The data are presented as population counts for the total population and various subgroups and percentages.	2018	acs > acs1 > spp	geographies	variables	groups	tags	examples	documentation	https://api.census.gov/data/2018/acs/acs1/spp
ACS 1-Year Subject Tables	The American Community Survey (ACS) is an ongoing survey that provides data every year -- giving communities the current information they need to plan investments and services. The ACS covers a broad range of topics about social, economic, demographic, and housing characteristics of the U.S. population. Much of the ACS data provided on the Census Bureau's Web site are available separately by age group, race, Hispanic origin, and sex. Summary files, Subject tables, Data profiles, and Comparison profiles are available for the nation, all 50 states, the District of Columbia, Puerto Rico, every congressional district, every metropolitan area, and all counties and places with populations of 65,000 or more. Subject tables provide an overview of the estimates available in a particular topic. The data are presented as population counts and percentages. There are over 16,000 variables in this dataset.	2018	acs > acs1 > subject	geographies	variables	groups	tags	examples	documentation	https://api.census.gov/data/2018/acs/acs1/subject

The American Community Survey

Table/Profile Numbering

B06004APR

- B=Data Product Type (Detailed Table)
- 06=Subject (Place of Birth)
- 004=Sequential Number (2 or 3 digits)
- A=Race/Hispanic Origin (White Alone)
- PR=For Puerto Rico Geographies Only

[census.gov/programs-surveys/acs/guidance/which-data-tool/table-ids-explained.html](https://www.census.gov/programs-surveys/acs/guidance/which-data-tool/table-ids-explained.html)

The American Community Survey

Detailed Table Variables

1	2	3					
B06004APR_001E	Estimate!!Total	PLACE OF BIRTH (WHITE ALONE) IN PUERTO RICO	not required	B06004APR_001EA , B06004APR_001M , B06004APR_001MA	0	int	B06004APR
B06004APR_002E	Estimate!!Total!!Born in Puerto Rico	PLACE OF BIRTH (WHITE ALONE) IN PUERTO RICO	not required	B06004APR_002EA , B06004APR_002M , B06004APR_002MA	0	int	B06004APR
B06004APR_003E	Estimate!!Total!!Born in the United States	PLACE OF BIRTH (WHITE ALONE) IN PUERTO RICO	not required	B06004APR_003EA , B06004APR_003M , B06004APR_003MA	0	int	B06004APR
B06004APR_004E	Estimate!!Total!!Native; born elsewhere	PLACE OF BIRTH (WHITE ALONE) IN PUERTO RICO	not required	B06004APR_004EA , B06004APR_004M , B06004APR_004MA	0	int	B06004APR
B06004APR_005E	Estimate!!Total!!Foreign born	PLACE OF BIRTH (WHITE ALONE) IN PUERTO RICO	not required	B06004APR_005EA , B06004APR_005M , B06004APR_005MA	0	int	B06004APR

1. Name - Table ID and Row
2. Label - Name of Variable
3. Concept - Table Name

The American Community Survey

Census Developers' Page

Variable Type	Title	Related Products	Meaning
E	Estimate	Summary Files, Subject Tables, Data Profiles, Comparison Profiles	A numeric representation of the estimate.
M	Margin of Error	Summary Files, Subject Tables, Data Profiles	A numeric representation of the margin of error.
PE	Percent Estimate	Data Profiles Only	An estimate representing a percent of the total.
PM	Percent Margin of Error	Data Profiles Only	The Margin of Error for the corresponding Percent Estimate (PE) variable

The American Community Survey

Detailed Tables on data.census.gov

MEDIAN VALUE (DOLLARS)

Survey/Program: American Community Survey Universe: Owner-occupied housing units Year: 2017 Estimate: 1-Year TableID: B25077



[RESTORE TABLE LAYOUT](#) [CHANGE TABLE LAYOUT](#)

	United States	
	Estimate	Margin of Error
Median value (dollars)	217,600	+/-437

The American Community Survey

Subject Tables on data.census.gov

FINANCIAL CHARACTERISTICS FOR HOUSING UNITS WITH A MORTGAGE

Survey/Program: American Community Survey Year: 2017 Estimate: 1-Year TableID: **S2506**

[RESTORE TABLE LAYOUT](#) [CHANGE TABLE LAYOUT](#)

United States				
	Owner-occupied housing units with a mortgage		Percent owner-occupied housing units with a mortgage	
	Estimate	Margin of Error	Estimate	Margin of Error
Owner-occupied housing units...	48,168,243	+/-156,666	48,168,243	+/-156,666
VALUE				
Less than \$50,000	1,487,181	+/-21,576	3.1%	+/-0.1
\$50,000 to \$99,999	4,663,608	+/-39,545	9.7%	+/-0.1
\$100,000 to \$299,999	23,781,265	+/-94,941	49.4%	+/-0.1
\$300,000 to \$499,999	10,454,044	+/-52,044	21.7%	+/-0.1
\$500,000 to \$749,999	4,396,363	+/-33,550	9.1%	+/-0.1
\$750,000 to \$999,999	1,717,445	+/-16,972	3.6%	+/-0.1
\$1,000,000 or more	1,668,337	+/-17,027	3.5%	+/-0.1
Median (dollars)	239,800	+/-481	239,800	+/-481
MORTGAGE STATUS				
With either a second mortga...	6,031,819	+/-46,832	12.5%	+/-0.1
Second mortgage only	1,163,934	+/-17,173	2.4%	+/-0.1
Home equity loan only	4,867,885	+/-38,280	10.1%	+/-0.1
Both second mortgage and ...	194,400	+/-6,642	0.4%	+/-0.1
feedback@ feedback@census.gov mortgage and no...	41,942,024	+/-132,414	87.1%	+/-0.1

Multiple topics

Estimate

Percent

The American Community Survey

Data Profiles on data.census.gov

SELECTED HOUSING CHARACTERISTICS
 Survey/Program: American Community Survey
 TableID: DP04

Product: 2018: ACS 1-Year Estimates Data Profiles CUSTOMIZE TABLE

	United States			
	Estimate	Margin of Error	Percent	Percent Margin of Error
▼ HOUSING OCCUPANCY				
▼ Total housing units	138,539,906	+/-4,033	138,539,906	(X)
Occupied housing units	121,520,180	+/-153,217	87.7%	+/-0.1
Vacant housing units	17,019,726	+/-155,617	12.3%	+/-0.1
Homeowner vacancy rate	1.5	+/-0.1	(X)	(X)
Rental vacancy rate	6.1	+/-0.1	(X)	(X)
▼ UNITS IN STRUCTURE				
▼ Total housing units	138,539,906	+/-4,033	138,539,906	(X)
1-unit, detached	85,012,921	+/-123,402	61.4%	+/-0.1
1-unit, attached	8,104,981	+/-41,909	5.9%	+/-0.1
2 units	4,923,261	+/-36,601	3.6%	+/-0.1
3 or 4 units	5,993,272	+/-42,774	4.3%	+/-0.1
5 to 9 units	6,554,010	+/-46,115	4.7%	+/-0.1
10 to 19 units	6,180,952	+/-47,467	4.5%	+/-0.1
20 or more units	13,134,966	+/-50,646	9.5%	+/-0.1
Mobile home	8,503,364	+/-52,368	6.1%	+/-0.1
Boat, RV, van, etc.	132,179	+/-5,959	0.1%	+/-0.1
▼ YEAR STRUCTURE BUILT				
▼ Total housing units	138,539,906	+/-4,033	138,539,906	(X)
Built 2014 or later	4,785,640	+/-44,516	3.5%	+/-0.1

Multiple topics

The American Community Survey

Median Home Value on data.census.gov

United States
Census
Bureau
🔍 Search

ALL **TABLES** MAPS PAGES

35 Results Filter

Years: 2017,2016,2015,2014,2013,2012,2011,2010
Table: B25075

LOWER VALUE QUARTILE (DOLLARS)
Survey/Program: American Community Survey
Years: 2017,2016,2015,2014,2013,2012,2011,2010
Table: B25076

MEDIAN VALUE (DOLLARS)
Survey/Program: American Community Survey
Years: 2017,2016,2015,2014,2013,2012,2011,2010
Table: B25077

MEDIAN VALUE (DOLLARS)

Survey/Program: American Community Survey **Universe:** Owner-occupied housing units **Year:** 2017

Estimate: 1-Year **TableID:** B25077

	Alabama		Alaska		Arizona	
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
Median value (dollars)	141,300	+/-1,758	273,100	+/-5,087	223,400	+/-1,876

The American Community Survey

Median Home Value API Query

United States Census Bureau

Search

ALL TABLES MAPS PAGES

35 Results Filter

Years: 2017, 2016, 2015, 2014, 2013, 2012, 2011, 2010
Table: B25075

LOWER VALUE QUARTILE (DOLLARS)
Survey/Program: American Community Survey
Years: 2017, 2016, 2015, 2014, 2013, 2012, 2011, 2010
Table: B25076

MEDIAN VALUE (DOLLARS)
Survey/Program: American Community Survey
Years: 2017, 2016, 2015, 2014, 2013, 2012, 2011, 2010
Table: B25077

MEDIAN VALUE (DOLLARS)
Survey/Program: American Community Survey
Universe: Owner-occupied housing units
Year: 2017
Estimate: 1-Year TableID: B25077

	Alabama		Alaska		Arizona	
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
Median value (dollars)	141,300	+/-1,758	273,100	+/-5,087	223,400	+/-1,876

https://api.census.gov/data/2017/acs/acs5?get=NAME,B25077_001E,B25077_001M&for=state:*

```
[["NAME", "B25077_001E", "B25077_001M", "state"],
["Puerto Rico", "115300", "604", "72"],
["Alabama", "132100", "743", "01"],
["Alaska", "261900", "2042", "02"],
["Arizona", "193200", "657", "04"],
["Arkansas", "118500", "720", "05"],
["California", "443400", "736", "06"],
["Colorado", "286100", "982", "08"],
["Connecticut", "270100", "1083", "09"],
["District of Columbia", "537400", "7150", "11"],
["Delaware", "238600", "1501", "10"],
["Florida", "178700", "560", "12"],
["Georgia", "158400", "511", "13"],
["Hawaii", "563900", "4339", "15"],
["Idaho", "176800", "1318", "16"],
["Illinois", "179700", "492", "17"],
["Indiana", "130200", "470", "18"],
["Iowa", "137200", "689", "19"],
["Kansas", "139200", "755", "20"],
["Kentucky", "130000", "601", "21"],
["Maine", "179900", "1153", "23"],
["Louisiana", "152900", "642", "22"],
["Massachusetts", "352600", "792", "25"],
["Maryland", "296500", "927", "24"],
```

The American Community Survey

The Anatomy of an API Query

https://api.census.gov/data/2017/acs/acs5?get=NAME,B25077_001E,B25077_001M&for=state:*

The American Community Survey

The Anatomy of an API Query

**Base for all Census
API queries**

https://api.census.gov/data/2017/acs/acs5?get=NAME,B25077_001E,B25077_001M&for=state:*

The American Community Survey

The Anatomy of an API Query

**Year and dataset
(Detailed Table)**

https://api.census.gov/data/2017/acs/acs5?get=NAME,B25077_001E,B25077_001M&for=state:*

The American Community Survey

The Anatomy of an API Query

https://api.census.gov/data/2017/acs/acs5?get=NAME,B25077_001E,B25077_001M&for=state:*

**Variable names
(Detailed Table)**

The American Community Survey

The Anatomy of an API Query

https://api.census.gov/data/2017/acs/acs5?get=NAME,B25077_001E,B25077_001M&for=state:*

Geography

The American Community Survey

Median Home Value API Query

United States Census Bureau

Search

ALL TABLES MAPS PAGES

35 Results Filter

Years: 2017, 2016, 2015, 2014, 2013, 2012, 2011, 2010
Table: B25075

MEDIAN VALUE (DOLLARS)
Survey/Program: American Community Survey Universe: Owner-occupied housing units Year: 2017
Estimate: 1-Year TableID: B25077

	Alabama		Alaska		Arizona	
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
Median value (dollars)	141,300	+/-1,758	273,100	+/-5,087	223,400	+/-1,876

LOWER VALUE QUARTILE (DOLLARS)
Survey/Program: American Community Survey
Years: 2017, 2016, 2015, 2014, 2013, 2012, 2011, 2010
Table: B25076

MEDIAN VALUE (DOLLARS)
Survey/Program: American Community Survey
Years: 2017, 2016, 2015, 2014, 2013, 2012, 2011, 2010
Table: B25077

https://api.census.gov/data/2017/acs/acs5?get=NAME,B25077_001E,B25077_001M&for=state:*

```
[["NAME", "B25077_001E", "B25077_001M", "state"],
["Puerto Rico", "115300", "604", "72"],
["Alabama", "132100", "743", "01"],
["Alaska", "261900", "2042", "02"],
["Arizona", "193200", "657", "04"],
["Arkansas", "118500", "720", "05"],
["California", "443400", "736", "06"],
["Colorado", "286100", "982", "08"],
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["Georgia", "158400", "511", "13"],
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["Idaho", "176800", "1318", "16"],
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["Indiana", "130200", "470", "18"],
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["Kansas", "139200", "755", "20"],
["Kentucky", "130000", "601", "21"],
["Maine", "179900", "1153", "23"],
["Louisiana", "152900", "642", "22"],
["Massachusetts", "352600", "792", "25"],
["Maryland", "296500", "927", "24"],
```

The American Community Survey

The Anatomy of an API Query

**Year and dataset
(Subject Table)**

https://api.census.gov/data/2017/acs/acs5/subject?get=NAME,S2506_C01_009E,S2506_C01_009M&for=state:*

The American Community Survey

The Anatomy of an API Query

https://api.census.gov/data/2017/acs/acs5/subject?get=NAME,S2506_C01_009E,S2506_C01_009M&for=state:*

**Variable names
(Subject Table)**

The American Community Survey

Subject Tables on data.census.gov

FINANCIAL CHARACTERISTICS FOR HOUSING UNITS WITH A MORTGAGE

Survey/Program: American Community Survey Year: 2017 Estimate: 1-Year TableID: S2506

[RESTORE TABLE LAYOUT](#) [CHANGE TABLE LAYOUT](#)

United States				
	Owner-occupied housing units with a mortgage		Percent owner-occupied housing units with a mortgage	
	Estimate	Margin of Error	Estimate	Margin of Error
Owner-occupied housing units...	48,168,243	+/-156,666	48,168,243	+/-156,666
VALUE				
Less than \$50,000	1,487,181	+/-21,576	3.1%	+/-0.1
\$50,000 to \$99,999	4,663,608	+/-39,545	9.7%	+/-0.1
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Both second mortgage and ...	194,400	+/-6,642	0.4%	+/-0.1
feedback@ feedback@census.gov mortgage and no...	41,942,024	+/-132,414	87.1%	+/-0.1

Multiple topics

Estimate

Percent

The American Community Survey

The Anatomy of an API Query

**Year and dataset
(Data Profile)**

https://api.census.gov/data/2018/acs/acs1/profile?get=NAME,DP04_0004E,DP02_0004PE&for=state:*

The American Community Survey

The Anatomy of an API Query

https://api.census.gov/data/2018/acs/acs1/profile?get=NAME,DP04_0002E,DP04_0002PE&for=state:*

**Variable names
(Data Profile)**

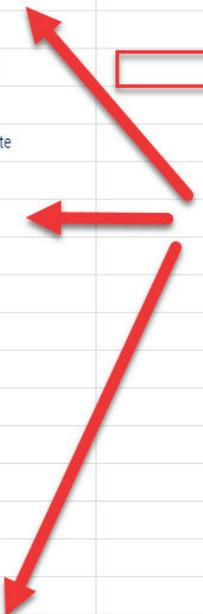
The American Community Survey Data Profile on data.census.gov

SELECTED HOUSING CHARACTERISTICS
 Survey/Program: American Community Survey
 TableID: DP04

Product: 2018: ACS 1-Year Estimates Data Profiles

[CUSTOMIZE TABLE](#)

	United States			
	Estimate	Margin of Error	Percent	Percent Margin of Error
▼ HOUSING OCCUPANCY				
▼ Total housing units	138,539,906	+/-4,033	138,539,906	(X)
Occupied housing units	121,520,180	+/-153,217	87.7%	+/-0.1
Vacant housing units	17,019,726	+/-155,617	12.3%	+/-0.1
Homeowner vacancy rate	1.5	+/-0.1	(X)	(X)
Rental vacancy rate	6.1	+/-0.1	(X)	(X)
▼ UNITS IN STRUCTURE				
▼ Total housing units	138,539,906	+/-4,033	138,539,906	(X)
1-unit, detached	85,012,921	+/-123,402	61.4%	+/-0.1
1-unit, attached	8,104,981	+/-41,909	5.9%	+/-0.1
2 units	4,923,261	+/-36,601	3.6%	+/-0.1
3 or 4 units	5,993,272	+/-42,774	4.3%	+/-0.1
5 to 9 units	6,554,010	+/-46,115	4.7%	+/-0.1
10 to 19 units	6,180,952	+/-47,467	4.5%	+/-0.1
20 or more units	13,134,966	+/-50,646	9.5%	+/-0.1
Mobile home	8,503,364	+/-52,368	6.1%	+/-0.1
Boat, RV, van, etc.	132,179	+/-5,959	0.1%	+/-0.1
▼ YEAR STRUCTURE BUILT				
▼ Total housing units	138,539,906	+/-4,033	138,539,906	(X)
Built 2014 or later	4,785,640	+/-44,516	3.5%	+/-0.1



Multiple topics

The American Community Survey Outline

- Census API Basics
- Using the API
- **API Tutorial and Examples**
- Resources for learning more

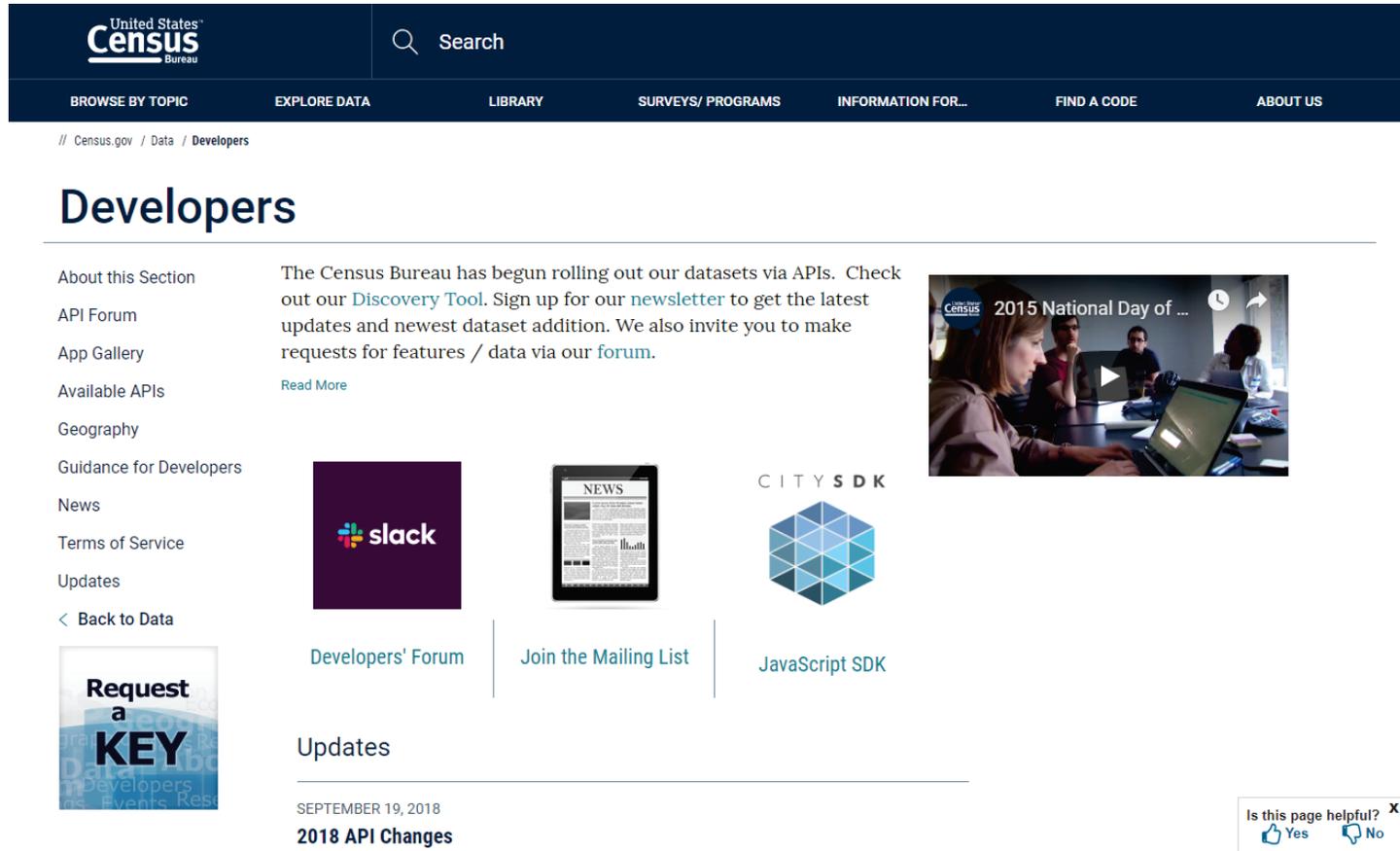
The American Community Survey

API Tutorial and Examples Outline

- **Pulling API data into Excel (Median home value)**
- Creating a custom dataset (Data wheel example)
- Doing a group API call (Educational attainment table)

The American Community Survey

Census Developers' Page



The screenshot shows the top navigation bar of the Census Bureau website with the logo and a search bar. Below the navigation bar are links for 'BROWSE BY TOPIC', 'EXPLORE DATA', 'LIBRARY', 'SURVEYS/ PROGRAMS', 'INFORMATION FOR...', 'FIND A CODE', and 'ABOUT US'. The breadcrumb trail reads '// Census.gov / Data / Developers'. The main heading is 'Developers'. On the left is a sidebar with links: 'About this Section', 'API Forum', 'App Gallery', 'Available APIs', 'Geography', 'Guidance for Developers', 'News', 'Terms of Service', 'Updates', and '< Back to Data'. The main content area features a paragraph about API datasets, a 'Read More' link, and three cards: 'Developers' Forum' with a Slack logo, 'Join the Mailing List' with a newspaper icon, and 'JavaScript SDK' with a 'CITY SDK' logo. A video player shows '2015 National Day of ...'. Below is an 'Updates' section with a link for '2018 API Changes' dated 'SEPTEMBER 19, 2018'. A 'Request a KEY' button is in the sidebar. A feedback box asks 'Is this page helpful?' with 'Yes' and 'No' options.

census.gov/developers

The American Community Survey Census Developers' Page - Navigation

- Scroll down to “Available APIs”
- Click on “View All Available APIs”

Available APIs

OCTOBER 17, 2019

American Community Survey 1-Year Data (2011-2018)

Areas with populations of 65,000+. Covers a broad range of topics about social, economic, demographic, and housing characteristics of the U.S. population.

SEPTEMBER 19, 2019

Economic Census (2017, 2012, 2007, 2002)

Economic and business data, down to the county level, includes number of establishments, sales and receipts, annual payroll, number of employees and more.

AUGUST 29, 2019

American Community Survey Migration Flows (2009-2017)

Migration flows between counties, minor civil divisions, and metropolitan areas using ACS 5-year data. Flows are crossed by selected characteristics.

[VIEW ALL AVAILABLE APIS](#)



census.gov/developers

The American Community Survey Census Developers' Page – Available APIs

Click on:

“American Community Survey 5-Year
Data (2009-2017)”

United States
Census
Bureau

Search

BROWSE BY TOPIC EXPLORE DATA LIBRARY SURVEYS/ PROGRAMS INFORMATION FOR... FIND A CODE ABOUT US

// Census.gov > Data > Developers > Available APIs

Developers

About this Section
API Forum
App Gallery
Available APIs
Geography
Guidance for Developers
News
Terms of Service
Updates
[Back to Developers](#)

Available APIs

We plan on adding more of our publicly available datasets. Here you'll find which of our many data sets are currently available via API. To make specific requests for the release of datasets, please sign up and submit your requests on our [Developer Forum](#).

NEW: We now have a machine-readable dataset discovery service available in beta release. Visit our [Discovery Tool page](#) to learn more.

Page 1 of 2 >

OCTOBER 17, 2019
American Community Survey 1-Year Data (2011-2018)
Areas with populations of 65,000+. Covers a broad range of topics about social, economic, demographic, and housing characteristics of the U.S. population.

OCTOBER 18, 2018
American Community Survey 1-Year Supplemental Data (2014 - 2017)
High-level detailed tables tabulated on the 1-year microdata for geographies with populations of 20,000 or more.

SEPTEMBER 15, 2016
American Community Survey 3-Year Data (2012-2013)
Areas with populations of 20,000+. Covers a broad range of topics about social, economic, demographic, and housing characteristics of the U.S. population.

DECEMBER 06, 2018
American Community Survey 5-Year Data (2009-2017)
Data available down to the block-group level. Covers a range of topics about social, economic, demographic, and housing characteristics of the U.S. population.

The American Community Survey

Census Developers' Page - Variables

- Scroll down to “Detailed Tables”
- This shows the API Call Structure
- Click on “2017 ACS Detailed Table Variables - HTML ”

Detailed Tables:

- API Call: [https://api.census.gov/data/2017/acs/acs5?get=NAME,group\(B01001\)&for=us:1](https://api.census.gov/data/2017/acs/acs5?get=NAME,group(B01001)&for=us:1)
- 2017 ACS Detailed Tables Variables [[html](#) | [xml](#) | [json](#)]
- [ACS Technical Documentation](#)
- [Examples and Supported Geography](#)



The American Community Survey

Census Developers' Page - Variables

- Wait to load
- Use Ctrl+F
- Search for “Median Value”

B25075_027E	Estimate!!Total!!\$2 000 000 or more	VALUE	not required	B25075_027EA , B25075_027M , B25075_027MA	0	int	B25075
B25076_001E	Estimate!!Lower value quartile (dollars)	LOWER VALUE QUARTILE (DOLLARS)	not required	B25076_001EA , B25076_001M , B25076_001MA	0	int	B25076
B25077_001E	Estimate!! Median value (dollars)	MEDIAN VALUE (DOLLARS)	not required	B25077_001EA , B25077_001M , B25077_001MA	0	int	B25077
B25078_001E	Estimate!!Upper value quartile (dollars)	UPPER VALUE QUARTILE (DOLLARS)	not required	B25078_001EA , B25078_001M , B25078_001MA	0	int	B25078
B25079_001E	Estimate!!Aggregate value (dollars)	AGGREGATE VALUE (DOLLARS) BY AGE OF HOUSEHOLDER	not required	B25079_001EA , B25079_001M , B25079_001MA	0	int	B25079

api.census.gov/data/2017/acs/acs5/variables.html

The American Community Survey

Median Value API Call

https://api.census.gov/data/2017/acs/acs5?get=NAME,B25077_001E,B25077_001M&for=state:*

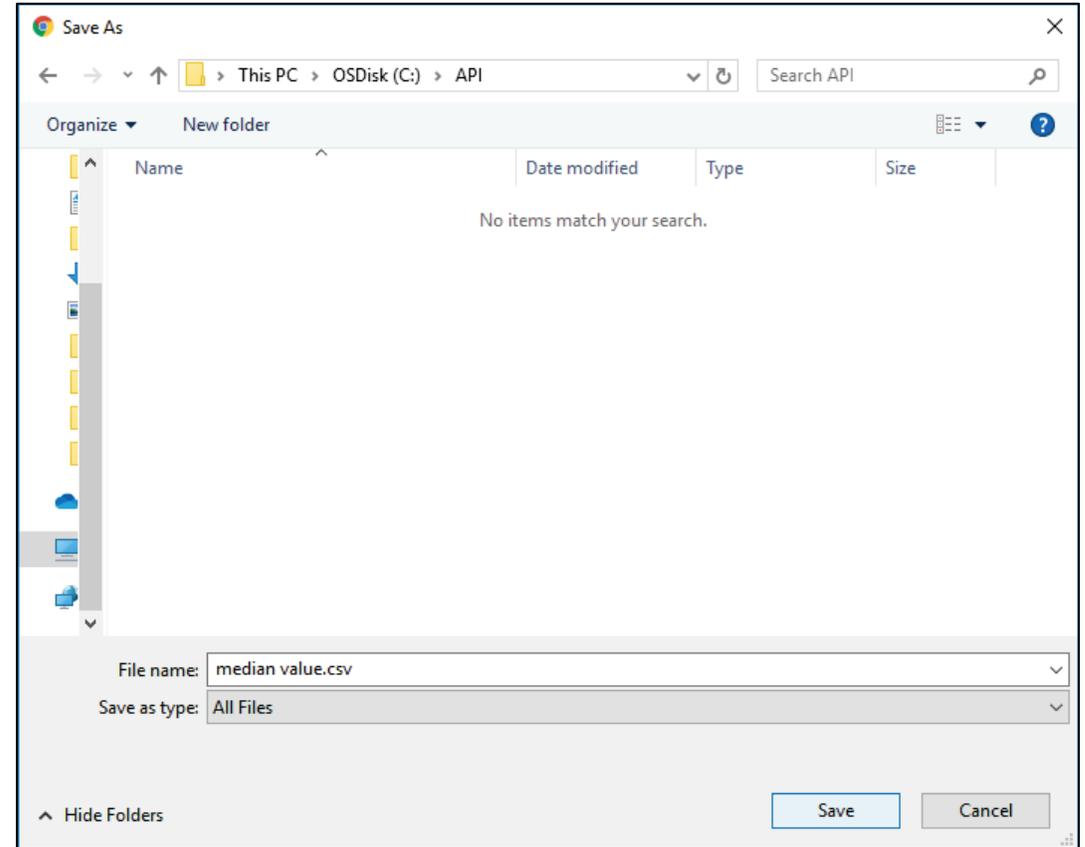
The American Community Survey Median Home Value API Call

- Enter URL into browser
- Right click on browser, click “Save as...”
- Change “Save as type” to “All Files”
- Change file name to end in “.csv”
- Open downloaded file in Excel.

```
[[{"NAME", "B25077_001E", "B25077_001M", "state"}, {"Puerto Rico", "115300", "604", "72"}, {"Alabama", "132100", "743", "01"}, {"Alaska", "261900", "2042", "02"}, {"Arizona", "193200", "657", "04"}, {"Arkansas", "118500", "720", "05"}, {"California", "443400", "736", "06"}, {"Colorado", "286100", "982", "08"}, {"Connecticut", "270100", "1083", "09"}, {"District of Columbia", "537400", "7150", "11"}, {"Delaware", "238600", "1501", "10"}, {"Florida", "178700", "560", "12"}, {"Georgia", "158400", "511", "13"}, {"Hawaii", "563900", "4339", "15"}, {"Idaho", "176800", "1318", "16"}, {"Illinois", "179700", "492", "17"}, {"Indiana", "130200", "470", "18"}, {"Iowa", "137200", "689", "19"}, {"Kansas", "139200", "755", "20"}, {"Kentucky", "130000", "601", "21"}, {"Maine", "179900", "1153", "23"}, {"Louisiana", "152900", "642", "22"}, {"Massachusetts", "352600", "792", "25"}, {"Maryland", "296500", "927", "24"}, {"Michigan", "136400", "401", "26"}, {"Minnesota", "199700", "511", "27"}, {"Mississippi", "109300", "877", "28"}, {"Missouri", "145400", "521", "29"}, {"Montana", "209100", "1566", "30"}, {"Nebraska", "142400", "765", "31"}, {"New Hampshire", "244900", "1359", "33"}, {"Nevada", "216400", "1300", "32"}, {"New Jersey", "321100", "871", "34"}, {"New Mexico", "163900", "853", "35"}, {"New York", "293000", "903", "36"}, {"North Carolina", "161000", "389", "37"}, {"North Dakota", "174100", "1436", "38"}, {"Ohio", "135100", "345", "39"}, {"Oklahoma", "125800", "644", "40"}, {"Oregon", "265700", "1159", "41"}, {"Pennsylvania", "170500", "301", "42"}, {"Rhode Island", "242200", "1575", "44"}, {"South Carolina", "148600", "633", "45"}, {"South Dakota", "152700", "1046", "46"}, {"Tennessee", "151700", "480", "47"}, {"Texas", "151500", "386", "48"}, {"Utah", "238300", "805", "49"}, {"Vermont", "220600", "1440", "50"}, {"Virginia", "255800", "1036", "51"}, {"West Virginia", "111600", "863", "54"}, {"Washington", "286800", "745", "53"}, {"Wyoming", "204900", "2315", "56"}, {"Wisconsin", "169300", "427", "55"}]]
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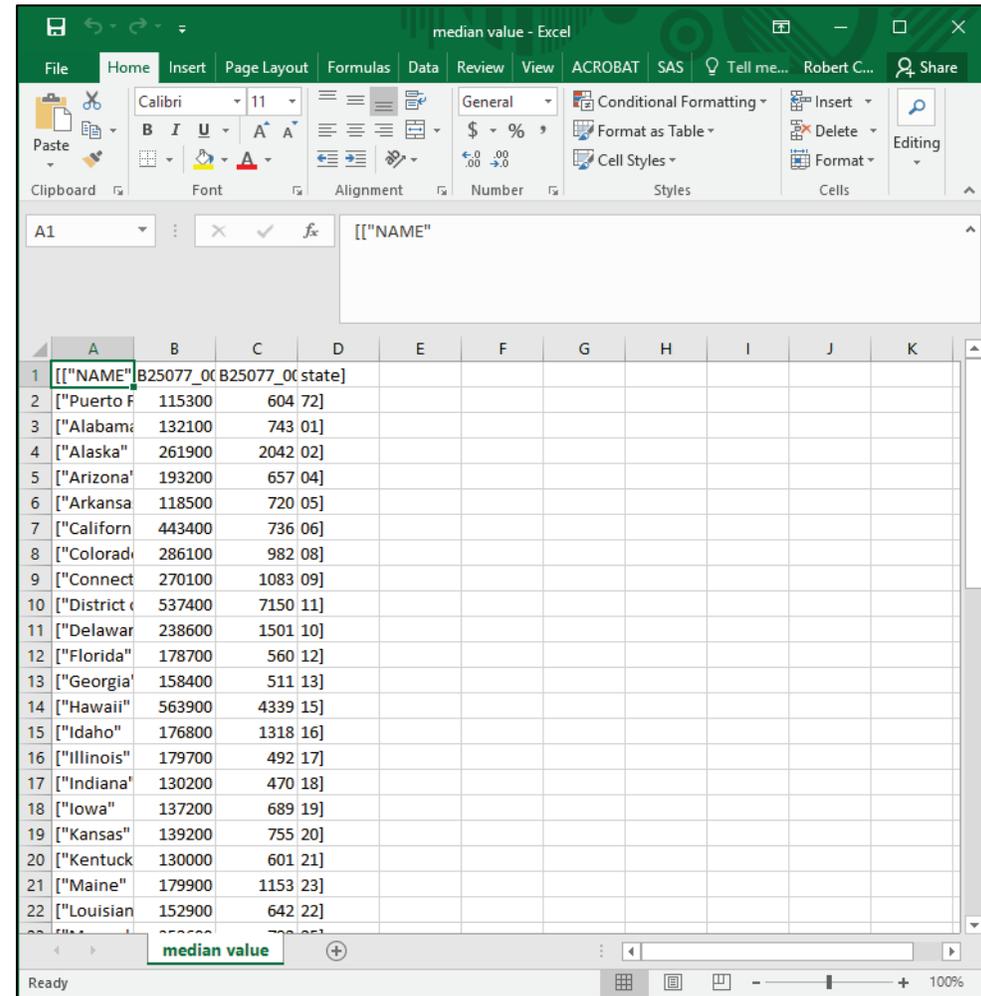
The American Community Survey Median Home Value API Call

- Enter URL into browser
- Right click on browser, click “Save as...”
- **Change “Save as type” to “All Files”**
- **Change file name to end in “.csv”**
- Open downloaded file in Excel.



The American Community Survey Median Home Value API Call

- Enter URL into browser
- Right click on browser, click “Save as...”
- Change “Save as type” to “All Files”
- Change file name to end in “.csv”
- **Open downloaded file in Excel.**

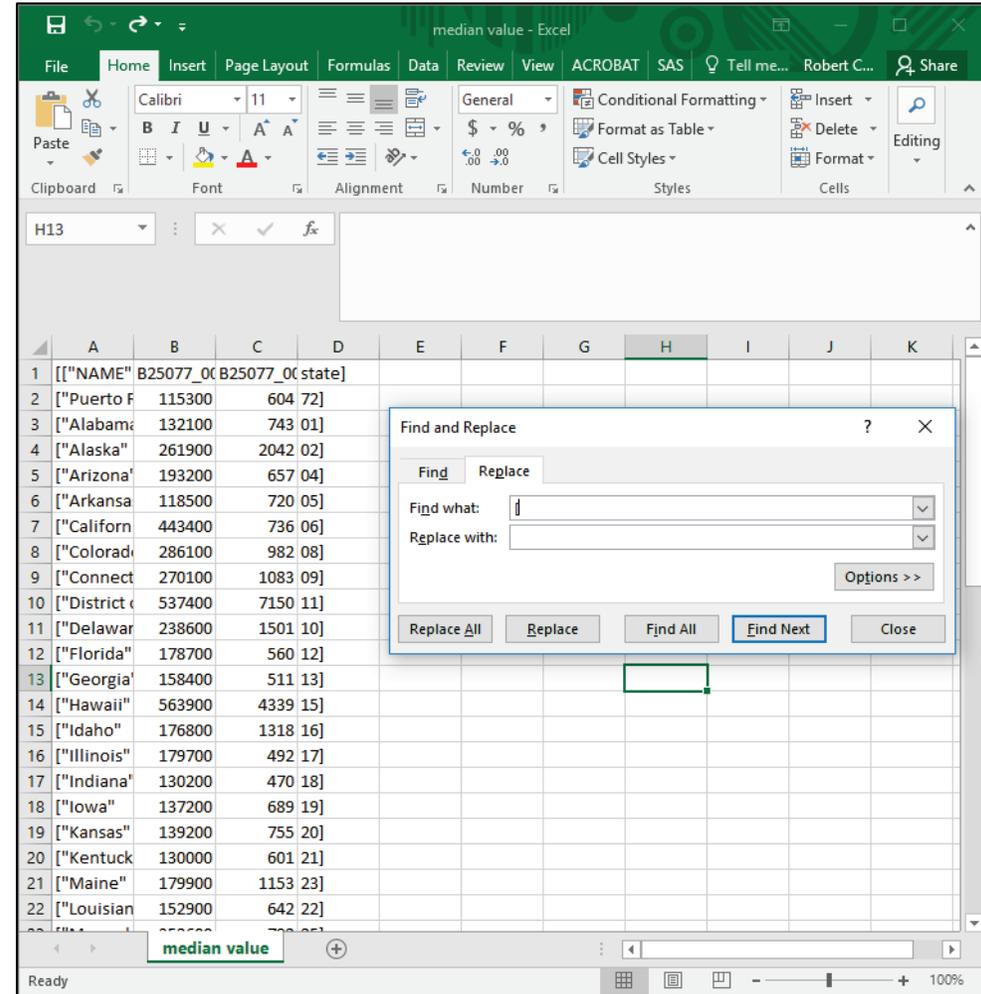


The screenshot shows an Excel spreadsheet with the following data:

	A	B	C	D	E	F	G	H	I	J	K
1	["NAME"	B25077_00	B25077_00	(state]							
2	["Puerto R	115300	604	72]							
3	["Alabama"	132100	743	01]							
4	["Alaska"	261900	2042	02]							
5	["Arizona"	193200	657	04]							
6	["Arkansa	118500	720	05]							
7	["Californ	443400	736	06]							
8	["Coloradi	286100	982	08]							
9	["Connect	270100	1083	09]							
10	["District	537400	7150	11]							
11	["Delawar	238600	1501	10]							
12	["Florida"	178700	560	12]							
13	["Georgia"	158400	511	13]							
14	["Hawaii"	563900	4339	15]							
15	["Idaho"	176800	1318	16]							
16	["Illinois"	179700	492	17]							
17	["Indiana"	130200	470	18]							
18	["Iowa"	137200	689	19]							
19	["Kansas"	139200	755	20]							
20	["Kentuck	130000	601	21]							
21	["Maine"	179900	1153	23]							
22	["Louisian	152900	642	22]							

The American Community Survey Census Developers' Page - Navigation

- Use CTRL+H to open “Find and Replace”
- Remove brackets and parentheses



The American Community Survey Median Value – Finished Product

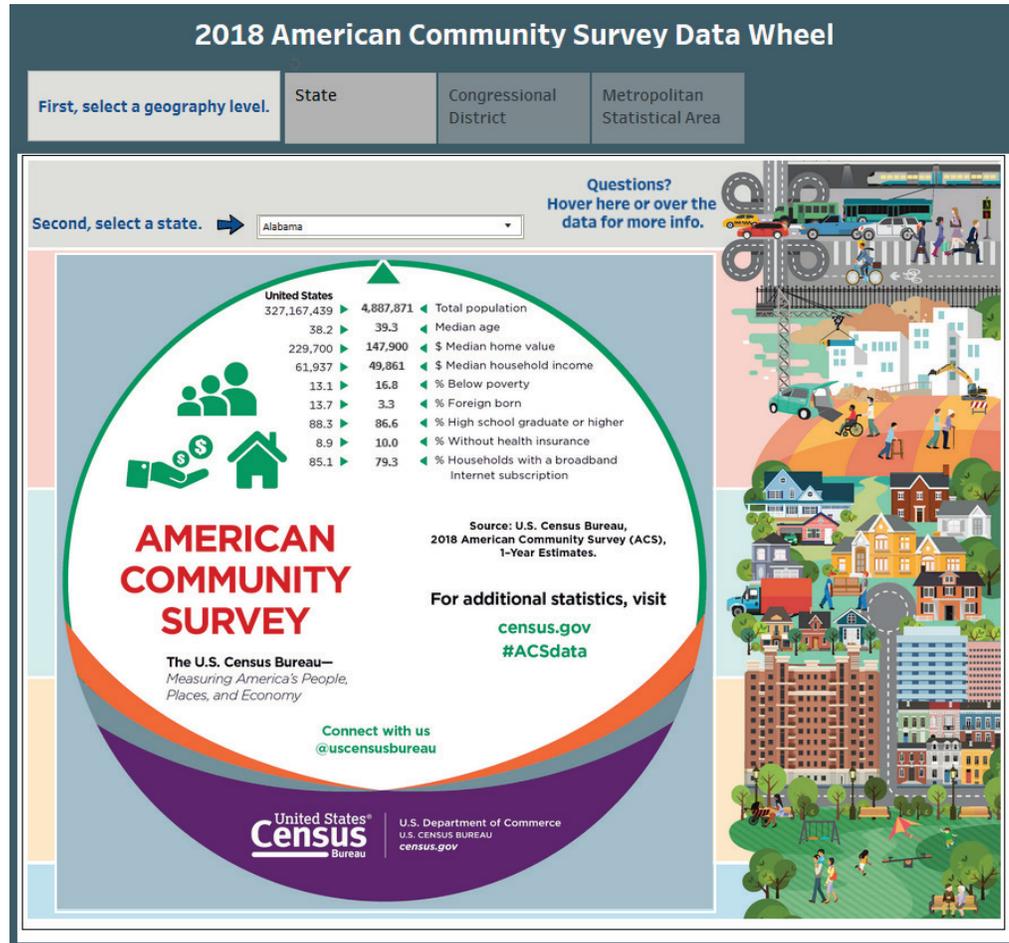
	A	B	C	D	E	F	G	H	I	J
1	NAME	B25077_001E	B25077_001M	state						
2	Puerto Rico	115300	604	72						
3	Alabama	132100	743	1						
4	Alaska	261900	2042	2						
5	Arizona	193200	657	4						
6	Arkansas	118500	720	5						
7	California	443400	736	6						
8	Colorado	286100	982	8						
9	Connecticut	270100	1083	9						
10	District of Columbia	537400	7150	11						
11	Delaware	238600	1501	10						
12	Florida	178700	560	12						
13	Georgia	158400	511	13						
14	Hawaii	563900	4339	15						
15	Idaho	176800	1318	16						
16	Illinois	179700	492	17						
17	Indiana	130200	470	18						
18	Iowa	137200	689	19						
19	Kansas	139200	755	20						
20	Kentucky	130000	601	21						
21	Maine	179900	1153	23						
22	Louisiana	152900	642	22						

The American Community Survey

API Tutorial and Examples Outline

- Pulling API data into Excel (Median home value)
- **Creating a custom dataset (Data wheel example)**
- Doing a group API call (Educational attainment table)

The American Community Survey ACS Data Wheel



- Total population
- Median Age
- Median home value
- Median household income
- Below poverty
- Foreign born
- High school graduate or higher
- Without health insurance
- Households with a broadband internet subscription

The American Community Survey

ACS Data Profiles in the API

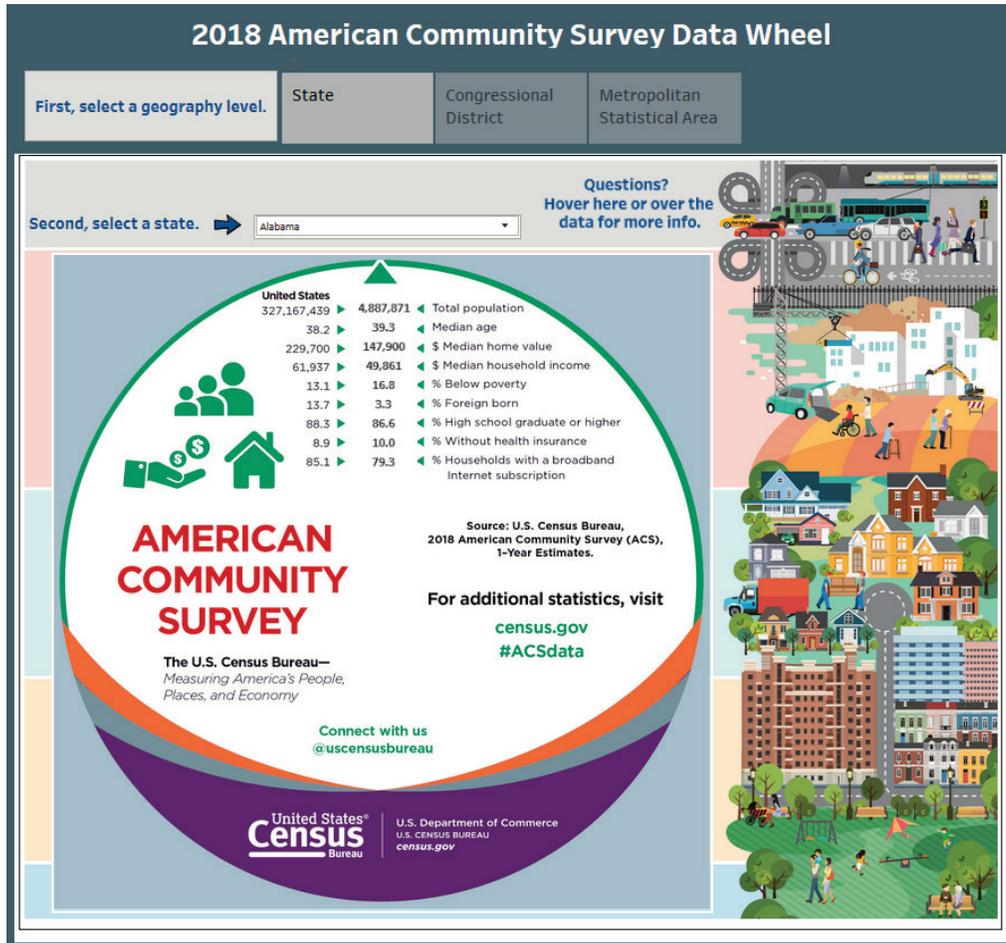
- Start on ACS 1-year data set page
 - <https://www.census.gov/data/developers/data-sets/acs-1year.html>
- Use the “2018 ACS Data Profiles Variables” list to find the ACS Data Wheel variables
- Use variables to construct an API Call for states
 - The year and data set for data profiles are “2018/acs/acs1/profile”
 - Count estimates end in E
 - Percentage estimates end in PE

- Examples:

https://api.census.gov/data/2018/acs/acs1/profile?get=NAME,DP02_0001E,DP02_0001PE&for=state:*

The American Community Survey

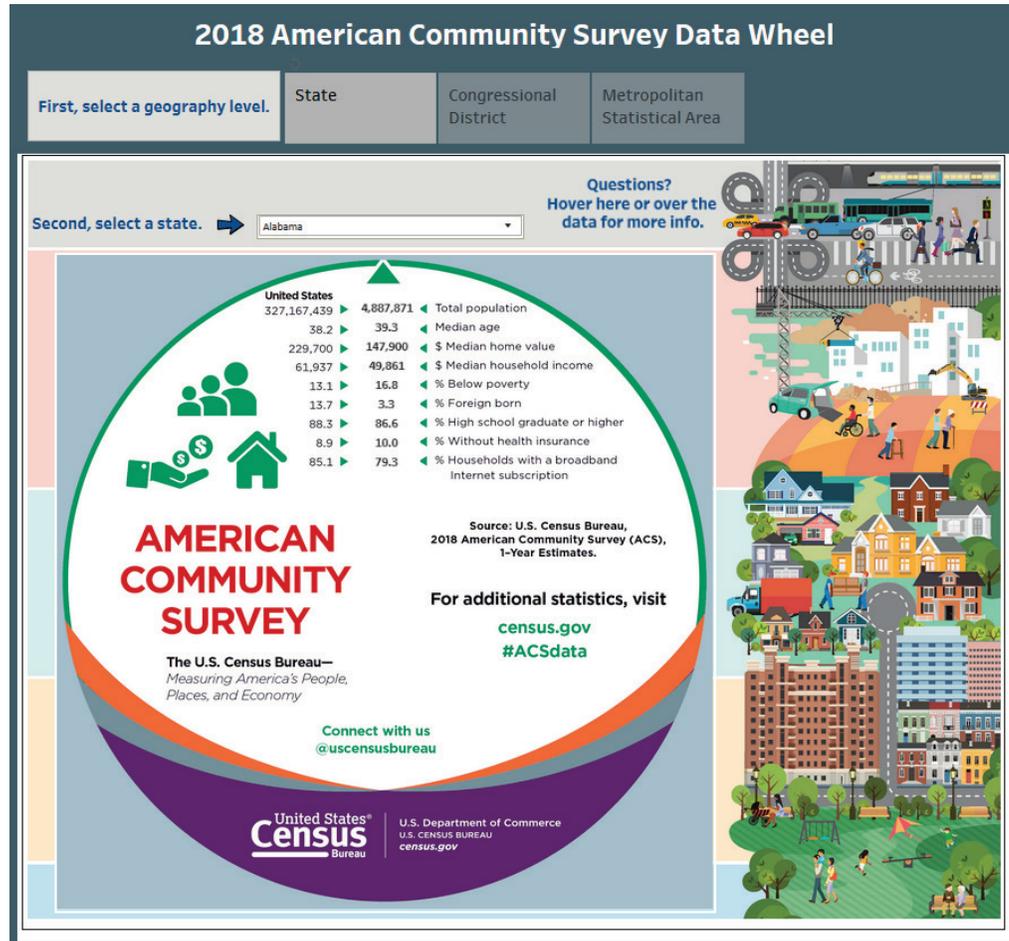
ACS Data Wheel Variables



- Total population (#)
- Median Age (#)
- Median home value (#)
- Median household income (#)
- Below poverty (%)
- Foreign born (%)
- High school graduate or higher (%)
- Without health insurance (%)
- Households with a broadband internet subscription (%)

The American Community Survey

ACS Data Wheel Variables with API Calls



- Total population (#) → DP05_0001E
- Median Age (#) → DP05_0018E
- Median home value (#) → DP04_0089E
- Median household income (#) → DP03_0062E
- Below poverty (%) → DP03_0128PE
- Foreign born (%) → DP02_0092PE
- High school graduate or higher (%) → DP02_0066PE
- Without health insurance (%) → DP03_0099PE
- Households with a broadband internet subscription (%) → DP02_0152PE

The American Community Survey
Data Wheel API Call

https://api.census.gov/data/2018/acs/acs1/profile?get=NAME,DP05_0001E,DP05_0018E,DP04_0089E,DP03_0062E,DP03_0128PE,DP02_0092PE,DP02_0066PE,DP03_0099PE,DP02_0152PE&for=state:*

The American Community Survey

ACS Data Wheel

- Total population (#) → DP05_0001E
- Median Age (#) → DP05_0018E
- Median home value (#) → DP04_0089E
- Median household income (#) → DP03_0062E
- Below poverty (%) → DP03_0128PE
- Foreign born (%) → DP02_0092PE
- High school graduate or higher (%) → DP02_0066PE
- Without health insurance (%) → DP03_0099PE
- Households with a broadband internet subscription (%) → DP02_0152PE

```

https://api.census.gov/data/2018/acs/acs1/profile?get=NAME,DP05_0001E,DP05_0018E,DP04_0089E,DP03_0062E,DP03_0128PE,DP02_0092PE,DP02_0066PE,DP03_0099PE,DP02_0152PE&for=state:*
[[{"NAME", "DP05_0001E", "DP05_0018E", "DP04_0089E", "DP03_0062E", "DP03_0128PE", "DP02_0092PE", "DP02_0066PE", "DP03_0099PE", "DP02_0152PE", "state"},
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The American Community Survey

Changing the Geography

Metropolitan Statistical Area/Micropolitan Statistical Area

metropolitan%20statistical%20area/micropolitan%20statistical%20area:*

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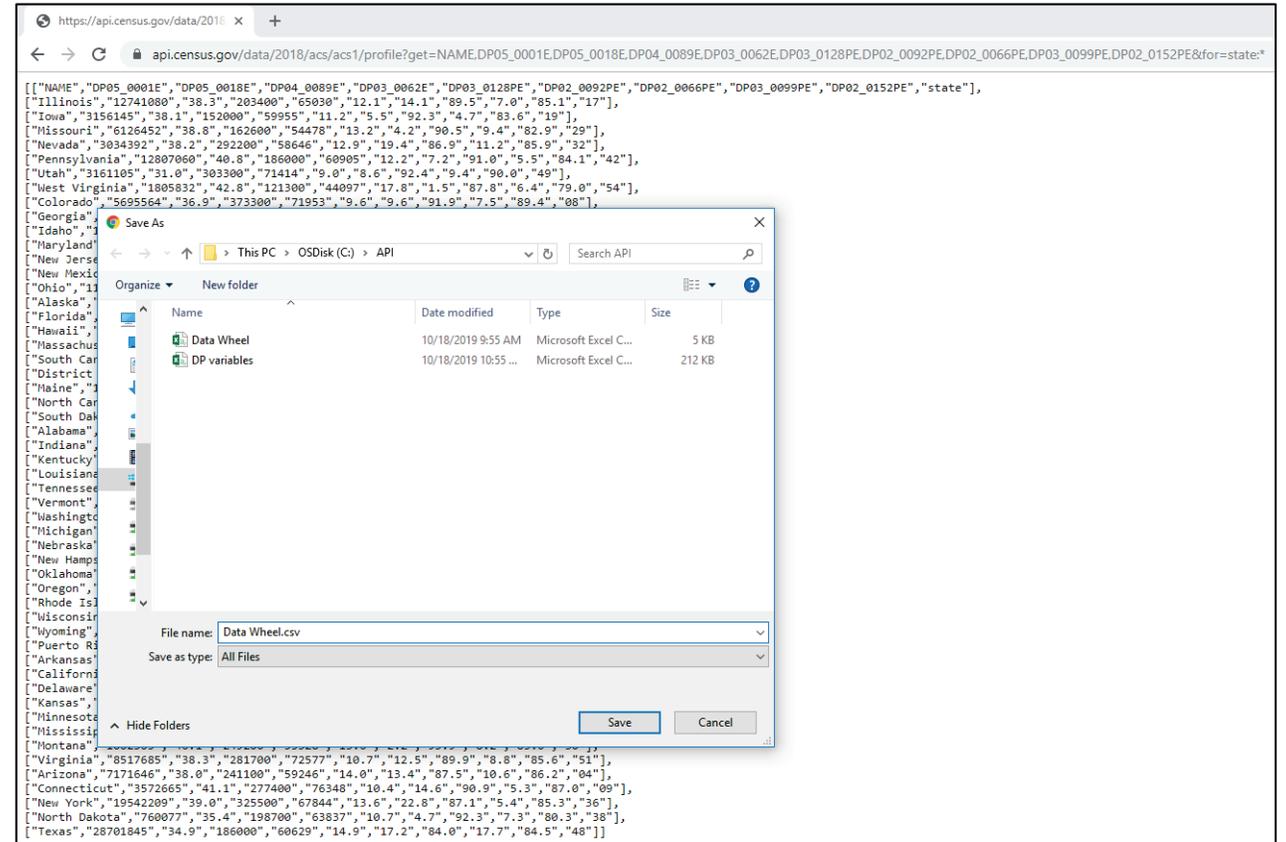
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The American Community Survey ACS Data Wheel

- Save as .csv
- Use CTRL+H to open “Find and Replace”
- Remove brackets and parentheses



The American Community Survey ACS Data Wheel Data – No Labels

- We have API calls, but no labels
- Let's add variable names

The screenshot shows an Excel spreadsheet titled "Data Wheel - Excel". The data is organized in a table with the following columns: NAME, DP05_0001E, DP05_0018E, DP04_0089E, DP03_0062E, DP03_0128PE, DP02_0092PE, DP02_0066PE, DP03_0099PE, DP02_0152PE, and state. The rows list various states, with West Virginia highlighted in row 8. The value 17.8 is entered in cell F8, which is highlighted with a green box. A red oval highlights the header row (row 1).

	NAME	DP05_0001E	DP05_0018E	DP04_0089E	DP03_0062E	DP03_0128PE	DP02_0092PE	DP02_0066PE	DP03_0099PE	DP02_0152PE	state
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3	Iowa	3156145	38.1	152000	59955	11.2	5.5	92.3	4.7	83.6	19
4	Missouri	6126452	38.8	162600	54478	13.2	4.2	90.5	9.4	82.9	29
5	Nevada	3034392	38.2	292200	58646	12.9	19.4	86.9	11.2	85.9	32
6	Pennsylvania	12807060	40.8	186000	60905	12.2	7.2	91	5.5	84.1	42
7	Utah	3161105	31	303300	71414	9	8.6	92.4	9.4	90	49
8	West Virginia	1805832	42.8	121300	44097	17.8	1.5	87.8	6.4	79	54
9	Colorado	5695564	36.9	373300	71953	9.6	9.6	91.9	7.5	89.4	8
10	Georgia	10519475	36.8	189900	58756	14.3	10.1	87.6	13.7	83.7	13
11	Idaho	1754208	36.8	233100	55583	11.8	6	90.9	11.1	86.2	16
12	Maryland	6042718	38.8	324800	83242	9	15.1	90.5	6	88.2	24
13	New Jersey	8908520	40	344000	81740	9.5	22.8	90.2	7.4	88	34
14	New Mexico	2095428	38.1	174700	47169	19.5	9.5	85.4	9.5	76.9	35
15	Ohio	11689442	39.5	151100	56111	13.9	4.8	90.7	6.5	84.5	39
16	Alaska	737438	34.9	276100	74346	10.9	8.2	93.3	12.6	87.5	2
17	Florida	21299325	42.2	230600	55462	13.6	21	88.5	13	85.2	12
18	Hawaii	1420491	39.3	631700	80212	8.8	18.7	92	4.1	85.7	15
19	Massachusetts	6902149	39.5	400700	79835	10	17.4	90.8	2.8	87.9	25
20	South Carolina	5084127	39.7	170800	52306	15.3	5.1	88.4	10.5	81.5	45
21	District of Columbia	702455	33.9	617900	85203	16.2	13.9	92.1	3.2	86.1	11
22	Maine	1338404	45.1	197500	55602	11.6	3.5	93	8	84	23
23	North Carolina	10383620	38.9	180600	53855	14	7.9	88.2	10.7	83.5	37
24	South Dakota	882235	37.2	171500	56274	13.1	4	92.3	9.8	82.1	46
25	Alabama	4887871	39.3	147900	49861	16.8	3.3	86.6	10	79.3	1
26	Indiana	6691878	37.8	147300	55746	13.1	5.3	89	8.3	82.8	18
27	Kentucky	4468402	39.1	148100	50247	16.9	3.8	86.8	5.6	81.7	21
28	Louisiana	4659978	37.3	167300	47905	18.6	4.2	85.8	8	78.1	22
29	Tennessee	6770010	38.9	177500	52375	15.3	5.1	87.8	10.1	82.1	47

https://api.census.gov/data/2018 x +

api.census.gov/data/2018/acs/acs1/profile/variables

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{"DP05_0029E","Estimate!!SEX AND AGE!!Total population!!65 years and over","ACS DEMOGRAPHIC AND HOUSING ESTIMATES"},
{"DP03_0108E","Estimate!!HEALTH INSURANCE COVERAGE!!Civilian noninstitutionalized population!!Civilian noninstitutionalized population 19 to 64 years!!In labor force!!Employed!!No health insurance coverage","SELECTED ECONOMIC CHARACTERISTICS"},
{"DP02PR_0052PE","Percent Estimate!!SCHOOL ENROLLMENT!!Population 3 years and over enrolled in school","SELECTED SOCIAL CHARACTERISTICS IN PUERTO RICO"},
{"DP02PR_0085E","Estimate!!RESIDENCE 1 YEAR AGO!!Population 1 year and over!!Elsewhere","SELECTED SOCIAL CHARACTERISTICS IN PUERTO RICO"},
{"DP03_0105E","Estimate!!HEALTH INSURANCE COVERAGE!!Civilian noninstitutionalized population!!Civilian noninstitutionalized population 19 to 64 years!!In labor force!!Employed!!With health insurance coverage","SELECTED ECONOMIC CHARACTERISTICS"}]]

```

Save As

This PC > OSDisk (C:) > API

Name	Date modified	Type	Size
Data Wheel	10/18/2019 9:55 AM	Microsoft Excel C...	5 KB
DP variables	10/18/2019 10:55 ...	Microsoft Excel C...	212 KB

File name: DP variables

Save as type: All Files

Save Cancel

DP variables.csv

Show all

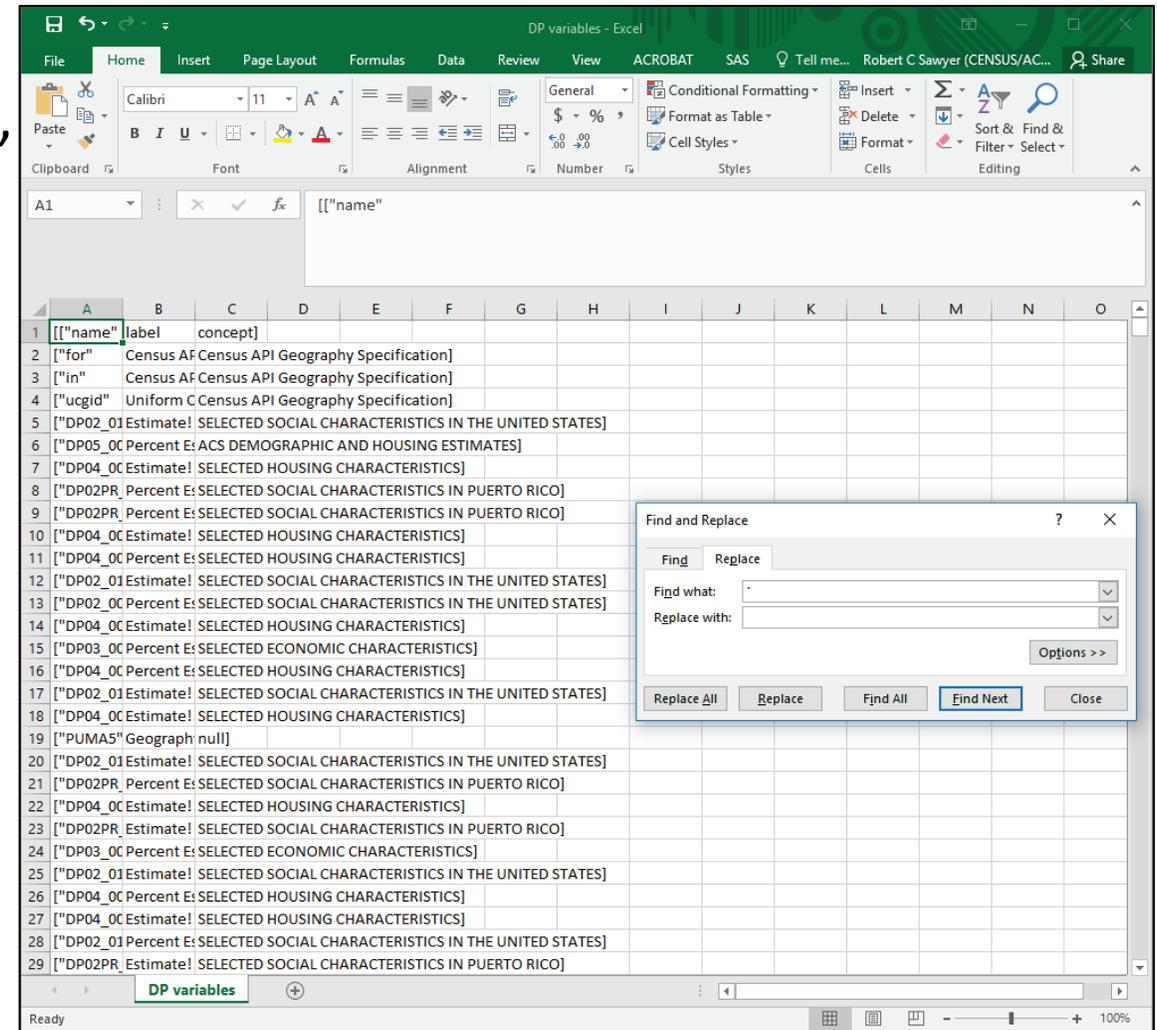


U.S. Department of Commerce
 Economics and Statistics Administration
 U.S. CENSUS BUREAU
 census.gov

api.census.gov/data/2018/acs/acs1/profile/variables

The American Community Survey ACS Data Profile Variables

- Use CTRL+H to open “Find and Replace”
- Remove brackets and parentheses
- Copy and paste into a new sheet in original excel workbook



The American Community Survey ACS Data Wheel Data – No Labels

- Copy and paste variables onto a second sheet
- Use vlookup to add labels
 - =vlookup(A1, Sheet1:1048576,2,0)
- Drag across to apply to each variable
- Save as excel workbook

The screenshot shows an Excel spreadsheet with the following data table:

	A	B	C	D	E	F	G	H	I	J	K
1	NAME	DP05_0001E	DP05_0018E	DP04_0089E	DP03_0062E	DP03_0128PE	DP02_0092PE	DP02_0066PE	DP03_0099PE	DP02_0152PE	state
2	'6,2,0)										
3	Illinois	12741080	38.3	203400	65030	12.1	14.1	89.5	7	85.1	17
4	Iowa	3156145	38.1	152000	59955	11.2	5.5	92.3	4.7	83.6	19
5	Missouri	6126452	38.8	162600	54478	13.2	4.2	90.5	9.4	82.9	29
6	Nevada	3034392	38.2	292200	58646	12.9	19.4	86.9	11.2	85.9	32
7	Pennsylvania	12807060	40.8	186000	60905	12.2	7.2	91	5.5	84.1	42
8	Utah	3161105	31	303300	71414	9	8.6	92.4	9.4	90	49
9	West Virginia	1805832	42.8	121300	44097	17.8	1.5	87.8	6.4	79	54
10	Colorado	5695564	36.9	373300	71953	9.6	9.6	91.9	7.5	89.4	8
11	Georgia	10519475	36.8	189900	58756	14.3	10.1	87.6	13.7	83.7	13
12	Idaho	1754208	36.8	233100	55583	11.8	6	90.9	11.1	86.2	16
13	Maryland	6042718	38.8	324800	83242	9	15.1	90.5	6	88.2	24
14	New Jersey	8908520	40	344000	81740	9.5	22.8	90.2	7.4	88	34
15	New Mexico	2095428	38.1	174700	47169	19.5	9.5	85.4	9.5	76.9	35
16	Ohio	11689442	39.5	151100	56111	13.9	4.8	90.7	6.5	84.5	39
17	Alaska	737438	34.9	276100	74346	10.9	8.2	93.3	12.6	87.5	2
18	Florida	21299325	42.2	230600	55462	13.6	21	88.5	13	85.2	12
19	Hawaii	1420491	39.3	631700	80212	8.8	18.7	92	4.1	85.7	15
20	Massachusetts	6902149	39.5	400700	79835	10	17.4	90.8	2.8	87.9	25
21	South Carolina	5084127	39.7	170800	52306	15.3	5.1	88.4	10.5	81.5	45
22	District of Columbia	702455	33.9	617900	85203	16.2	13.9	92.1	3.2	86.1	11
23	Maine	1338404	45.1	197500	55602	11.6	3.5	93	8	84	23
24	North Carolina	10383620	38.9	180600	53855	14	7.9	88.2	10.7	83.5	37
25	South Dakota	882235	37.2	171500	56274	13.1	4	92.3	9.8	82.1	46
26	Alabama	4887871	39.3	147900	49861	16.8	3.3	86.6	10	79.3	1
27	Indiana	6691878	37.8	147300	55746	13.1	5.3	89	8.3	82.8	18
28	Kentucky	4468402	39.1	148100	50247	16.9	3.8	86.8	5.6	81.7	21
29	Louisiana	4659978	37.3	167300	47905	18.6	4.2	85.8	8	78.1	22

The American Community Survey ACS Data Wheel Data – Finished Product

1	NAME	DP05_0001E	DP05_0018E	DP04_0089E	DP03_0062E	DP03_0128PE	DP02_0092PE	DP02_0066PE	DP03_0099PE	DP02_0152PE	state
2	label	population	age (years)	Median income (dollars)	Median household income (dollars)	LEVEL!!All people	Foreign born	graduate or higher	insurance coverage	Internet subscription	geography
3	Illinois	12741080	38.3	203400	65030	12.1	14.1	89.5	7	85.1	17
4	Iowa	3156145	38.1	152000	59955	11.2	5.5	92.3	4.7	83.6	19
5	Missouri	6126452	38.8	162600	54478	13.2	4.2	90.5	9.4	82.9	29
6	Nevada	3034392	38.2	292200	58646	12.9	19.4	86.9	11.2	85.9	32
7	Pennsylvania	12807060	40.8	186000	60905	12.2	7.2	91	5.5	84.1	42
8	Utah	3161105	31	303300	71414	9	8.6	92.4	9.4	90	49
9	West Virginia	1805832	42.8	121300	44097	17.8	1.5	87.8	6.4	79	54
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15	New Mexico	2095428	38.1	174700	47169	19.5	9.5	85.4	9.5	76.9	35
16	Ohio	11689442	39.5	151100	56111	13.9	4.8	90.7	6.5	84.5	39

The American Community Survey

API Tutorial and Examples Outline

- Pulling API data into Excel (Median home value)
- Creating a custom dataset (Data wheel example)
- **Doing a group API call (Educational attainment table)**

The American Community Survey

Groups Function

- Get full tables rather than just one estimate at a time
- Groups for 2018 ACS5 main page:
 - <https://api.census.gov/data/2017/acs/acs1/subjects/groups.html>
- Example query for 2017 ACS5: Group B14001
 - [https://api.census.gov/data/2018/acs/acs1?get=group\(B14001\)&for=us:*](https://api.census.gov/data/2018/acs/acs1?get=group(B14001)&for=us:*)
- All variable names will appear first followed by all the values in the output

The American Community Survey

School Enrollment on data.census.gov

SCHOOL ENROLLMENT BY LEVEL OF SCHOOL FOR THE POPULATION 3 YEARS AND OVER

Survey/Program: American Community Survey
TableID: B14001

Product: 2018: ACS 1-Year Estimates Detailed Tables
Universe: Population 3 years and over

CUSTOMIZE TABLE

	United States	
	Estimate	Margin of Error
▼ Total:	315,667,352	+/-37,621
▼ Enrolled in school:	80,916,775	+/-98,966
Enrolled in nursery school, preschool	4,966,330	+/-40,813
Enrolled in kindergarten	3,978,101	+/-33,257
Enrolled in grade 1 to grade 4	15,913,775	+/-56,567
Enrolled in grade 5 to grade 8	16,889,363	+/-56,560
Enrolled in grade 9 to grade 12	17,100,878	+/-44,704
Enrolled in college, undergraduate years	17,792,902	+/-70,937
Graduate or professional school	4,275,426	+/-39,714
Not enrolled in school	234,750,577	+/-99,148



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[census.gov](https://www.census.gov)

<https://data.census.gov/cedsci/table?q=b14001&lastDisplayedRow=9&table=B14001&tid=ACSDT1Y2018.B14001>

The American Community Survey School Enrollment on the API

The screenshot shows an Excel spreadsheet with the following data:

GEO_ID	B14001_0C	B14001_01	B14001_01	NAME	B1400																		
0100000U	3.16E+08	37621	80916775	98966	4966330	40813	3978101	33257	15913775	56567	16889363	56560	17100878	44704	17792902	70937	4275426	39714	2.35E+08	99148	United	Stenull	

The American Community Survey Outline

- Census API Basics
- Using the API
- API Tutorial and Examples
- **Resources for learning more**

The American Community Survey Main Page

The screenshot shows the main page of the American Community Survey (ACS) on the census.gov website. The page features a dark blue header with the United States Census Bureau logo and a search bar. Below the header is a navigation menu with links for BROWSE BY TOPIC, EXPLORE DATA, LIBRARY, SURVEYS/ PROGRAMS, INFORMATION FOR..., FIND A CODE, and ABOUT US. The main content area has a breadcrumb trail: // Census.gov / Our Surveys & Programs / American Community Survey (ACS). The title "American Community Survey (ACS)" is prominently displayed. To the left is a sidebar with various links such as "About the Survey", "Respond to the Survey", "News & Updates", "Data", "Guidance for Data Users", "Geography & ACS", "Technical Documentation", "Methodology", "Library", "Operations and Administration", and "Contact Us". A "Respond to the ACS Learn how" button is also present. The main text describes the ACS as a premier source for population and housing information. Below this are three columns with images and questions: "How do I respond to the ACS?" (with a computer screen image), "Why do you ask each question?" (with an American flag image), and "Where can I get ACS data?" (with a map image). A video player is visible on the right side of the main content area. At the bottom, there is a "Data" section with a "2017 Data Release" link and a brief description of the release.

United States
Census
Bureau

Search

BROWSE BY TOPIC EXPLORE DATA LIBRARY SURVEYS/ PROGRAMS INFORMATION FOR... FIND A CODE ABOUT US

// Census.gov / Our Surveys & Programs / American Community Survey (ACS)

American Community Survey (ACS)

About the Survey
Respond to the Survey
News & Updates
Data
Guidance for Data Users
Geography & ACS
Technical Documentation
Methodology
Library
Operations and Administration
Contact Us

Respond to the ACS
Learn how

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.

How do I respond to the ACS?

Why do you ask each question?

Where can I get ACS data?

American Community ...

Data

2017 Data Release
Learn more about 2017 ACS data releases, including the latest release of new 2013-2017 ACS 5-year PUMS files and Variance Replicate Estimates.

The American Community Survey Technical Documentation Page

The screenshot shows the top navigation bar of the U.S. Census Bureau website. The main header includes the 'United States Census Bureau' logo, a search bar, and a navigation menu with options: 'BROWSE BY TOPIC', 'EXPLORE DATA', 'LIBRARY', 'SURVEYS/ PROGRAMS', 'INFORMATION FOR...', 'FIND A CODE', and 'ABOUT US'. Below the navigation is a breadcrumb trail: '// Census.gov / Our Surveys & Programs / American Community Survey (ACS) / Technical Documentation'. The main content area features a large heading 'American Community Survey (ACS)' and a sub-heading 'Technical Documentation'. A left sidebar contains a menu with items like 'About the Survey', 'Respond to the Survey', 'News & Updates', 'Data', 'Guidance for Data Users', 'Geography & ACS', and 'Technical Documentation' (which is highlighted). The main content area has three sections: 'Technical Documentation' with a Facebook icon and a paragraph about documentation resources; 'Code Lists, Definitions, and Accuracy' with an envelope icon and a paragraph about codes and definitions; and 'User Notes' with a paragraph about issues impacting the survey. A right sidebar contains 'Related Information' with links to 'American Community Survey Data', 'Share Your ACS Data Story', and 'Contact Us'; 'You May Be Interested In' with 'RELATED TOPICS' and 'AROUND THE BUREAU' sections, each containing 'Contact Us' and 'Email Updates' links; and 'MOST POPULAR' with a link to 'Share Your ACS Data Story'.

census.gov/programs-surveys/acs/technical-documentation.html

The American Community Survey Data User Handbooks

New or Recently Updated

- What All Data Users Need to Know
- What State and Local Government Data Users Need to Know
- What Users of Data for Rural Areas Need to Know
- Using the American Community Survey Summary File

Coming Soon

- Using the Census Data API With the ACS
- What Researchers Need to Know



The American Community Survey Training Presentations



[BROWSE BY TOPIC](#) [EXPLORE DATA](#) [LIBRARY](#) [SURVEYS/ PROGRAMS](#) [INFORMATION FOR...](#) [FIND A CODE](#) [ABOUT US](#)

// [Census.gov](#) > [Our Surveys & Programs](#) > [American Community Survey \(ACS\)](#) > [Guidance for Data Users](#) > [American Community Survey Training Presentations](#)

American Community Survey (ACS)

Subjects Included in the Survey

Which Data Table or Tool Should I Use?

When to Use 1-year, 3-year, or 5-year Estimates

Handbooks

Comparing ACS Data

Statistical Testing Tool

Training Presentations

[Back to Guidance for Data Users](#)





Training Presentations



Want to learn more about American Community Survey (ACS) data and data products? Need to train others how to understand the data? These training presentations can help.



TRAINING | SEPTEMBER 19, 2019

2018 ACS 1-Year Pre-Release Webinar

This webinar will cover background information about the ACS, updates for this release, and where to find new data release information on the ACS website.

TRAINING | SEPTEMBER 11, 2019

Introduction to the American Community Survey

Discover the detailed social, economic, and housing statistics that the American Community Survey (ACS) provides for every community every year.

TRAINING | AUGUST 28, 2019

Using the Census Bureau Planning Database with the ROAM Webinar

ROAM is based on a subset of the Planning Database data at the census tract-level, including the LRS, poverty status, education level, race, and more.

Related Information

[Share Your ACS Data Story](#)

[Contact Us](#)

You May Be Interested In

RELATED TOPICS

[Contact Us](#)

AROUND THE BUREAU

[Email Updates](#)

MOST POPULAR

[Share Your ACS Data Story](#)

The American Community Survey

Census Gitter.im

GITTER

uscensusbureau/general for general q/a's about programmatic access to Census data. See API Uptime: https:...

Where communities thrive

FREE FOR COMMUNITIES

JOIN OVER 800K+ PEOPLE
JOIN OVER 90K+ COMMUNITIES
CREATE YOUR OWN COMMUNITY

EXPLORE MORE COMMUNITIES

Browser, Desktop and Mobile Apps.

SIGN IN TO START TALKING

PEOPLE

SEE ALL (392 PEOPLE)

Hadi Baghchehsarai @HadiB_gitlab Jun 06 09:48
Like the query requirements for a pull?

Logan Powell @loganpowell Jun 06 09:56
what's your call?

Hadi Baghchehsarai @HadiB_gitlab Jun 06 10:00
https://api.census.gov/data/timeseries/intltrade/imports/hs?get=_COMMODITY,CON_QY1_MO,CON_CIF_MO&YEAR=2019&MONTH=02&I_COMMODITY=72* it was working fine for months now and today it is not pulling anything

Hadi Baghchehsarai @HadiB_gitlab Jun 06 10:39
Even the query from the example site is not working
<https://api.census.gov/data/timeseries/intltrade/exports/hs/examples.html>

Logan Powell @loganpowell Jun 06 10:50
@HadiB_gitlab can you please submit a bug report to:
cnmp.developers.list@census.gov?

Hadi Baghchehsarai @HadiB_gitlab Jun 06 10:51
Of course, I will email it. But yeah it appears that it is down right?

Logan Powell @loganpowell Jun 06 10:52
These should be working and they aren't

Hadi Baghchehsarai @HadiB_gitlab Jun 06 10:58
Opps I just sent my email and it appears to be working right now.

Logan Powell @loganpowell Jun 06 10:59
no worries. They need to be made aware of any interruptions

Hadi Baghchehsarai @HadiB_gitlab Jun 06 11:46
Actually seems to be working and then not.

<https://gitter.im/uscensusbureau/general>



AMERICAN COMMUNITY SURVEY DATA USERS GROUP

- Purpose:
 - Improve understanding of the value and utility of ACS data.
 - Promote information sharing among data users about key ACS data issues and applications.
- Membership is free and open to all interested ACS data users
- Users group website and online community
- ACS Data Users Conferences

acsdatacommunity.prb.org

The American Community Survey Need Local Stats?

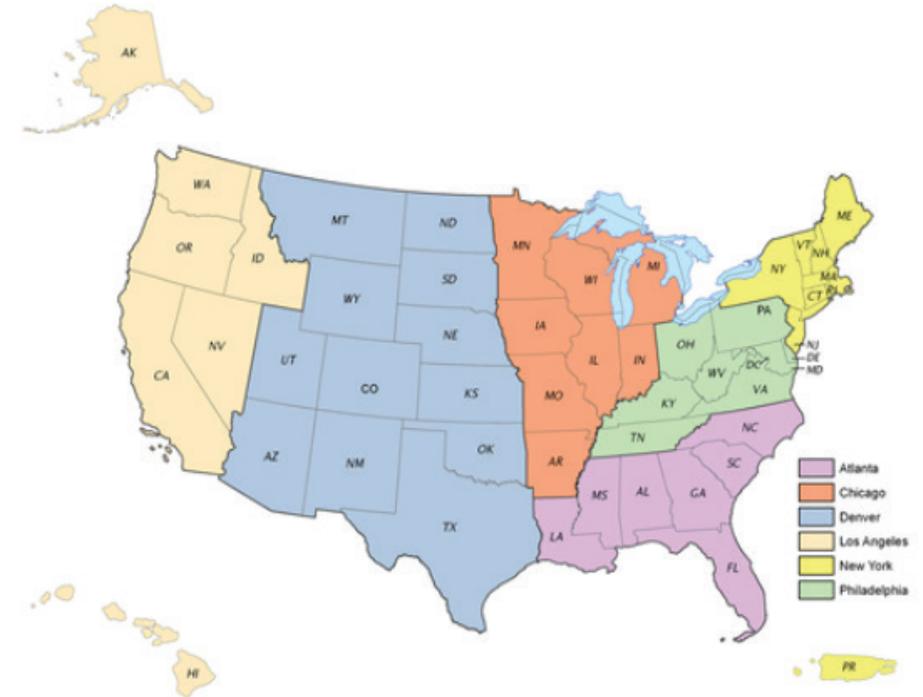
- **FREE Assistance Near You!**
Our regional data staff can help you access local statistics from the ACS or offer training to help build your skills.

- **Contact us at:**

1-844-ASK-DATA

(1-844-275-2382)

census.askdata@census.gov



The American Community Survey

Continue the Conversation



Sign up for and manage alerts at
<https://public.govdelivery.com/accounts/USCENSUS/subscriber/new>



Social media: @uscensusbureau
#ACSdata



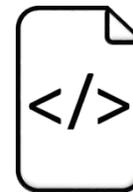
More information online:
census.gov/acs



acso.users.support@census.gov



Census **Customer Service Center**
800-923-8282



Source Us:
*U.S. Census Bureau's [YYYY – YYYY] American
Community Survey
[1/3/5]-year [estimates/statistics/data release]*