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

June 14, 2018

Access the Audio

Toll free number: 888-810-3138 Passcode: 5490695

Tyson Weister, American Community Survey Office Tammy Anderson, Decennial Information Technology Division, U.S. Census Bureau



#### Outline

- ACS and Census API Basics
- Using the API
- Building an API Request
- API Demo
- Resources for Learning More
- Stay in Touch
- Questions



# **American Community Survey is Foundational**

- The nation's most current, reliable, and accessible data source for local statistics on critical planning topics such as age, children, veterans, commuting, education, income, and employment
- Surveys about **3.5 million** addresses and informs **\$675 billion** of Federal government spending each year
- Designed to produce critical information on small areas and small population groups previously collected on the decennial long form
- Covers **35+ topics**, supports over **300** evidence-based Federal government uses, and produces **11 billion** estimates each year
- Three key annual data releases:
  - 1-year estimates (12 months of data)
  - 1-year Supplemental Estimates (12 months of data)
  - 5-year estimates (60 months of data)





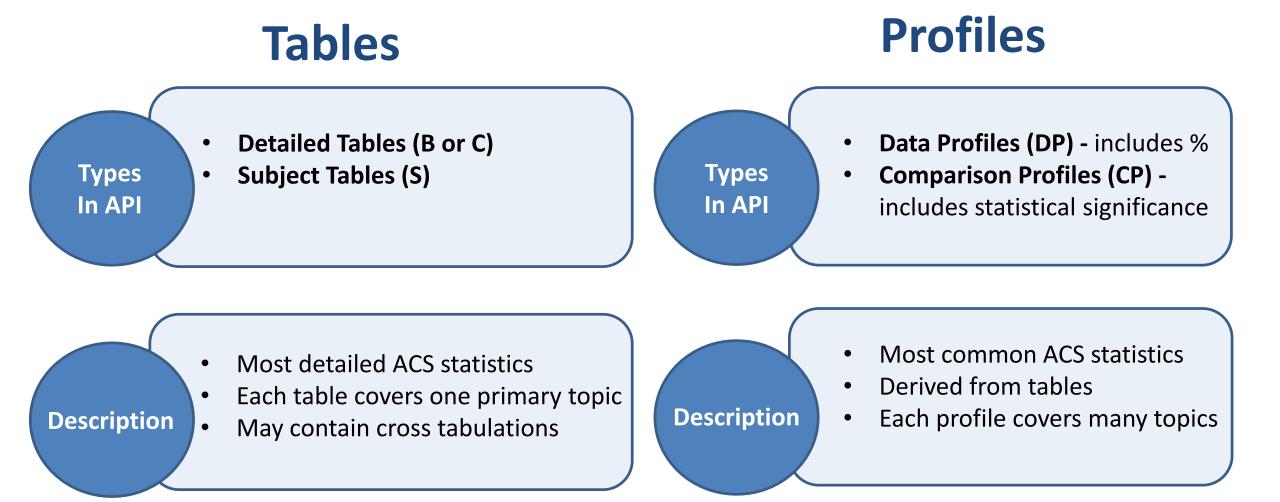
### **Availability of ACS Data Products**

Estimated Population of Geographic Area	1-Year Estimates	1-Year Supplemental Estimates	5-Year Estimates
65,000 or more	Х	Х	Х
20,000 to 64,999		X	Х
Less than 20,000			Х
Planned Release Date	September 13, 2018	October 18, 2018	December 6, 2018

census.gov/programs-surveys/acs/news/data-releases.html



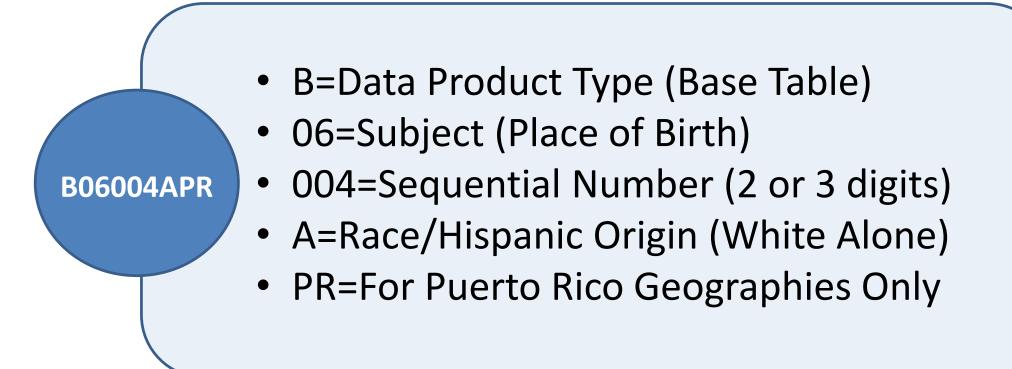
# **Types of ACS Tables in API**



census.gov/programs-surveys/acs/guidance/which-data-tool/table-ids-explained.html



# **Table/Profile Numbering**



census.gov/programs-surveys/acs/guidance/which-data-tool/table-ids-explained.html



# The Census Data API

- Application Programming Interface
- Data Service
- Enables Census Bureau data providers to expose data in a standardized way
- Gives software developers the ability to create custom apps
- Allows data scientists more flexibility to develop data analytics



# Advantages

- Reduces the learning curve by standardizing across multiple datasets
- Access only the variables, geographies and table cells needed
- No need to host data on another server
- Gives immediate access to most current data
- No complex interface



## Uses

• Supports mobile and web applications

• Drives interactive data visualizations

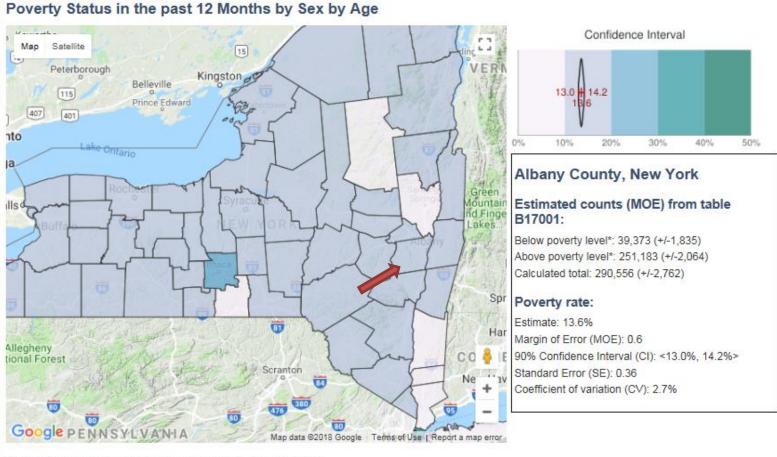
• Connects to statistical analysis software like R



#### Home Contact

#### Select subgroup: All

V



\* Source: Table B17001: American Community Survey, 2010-2014 This product uses the Census Bureau Data API but is not endorsed or certified by the Census Bureau.

#### http://pad.human.cornell.edu/Unlisted/uncertaintymap\_fullinfo\_api\_B17001.cfm

Census Bureau

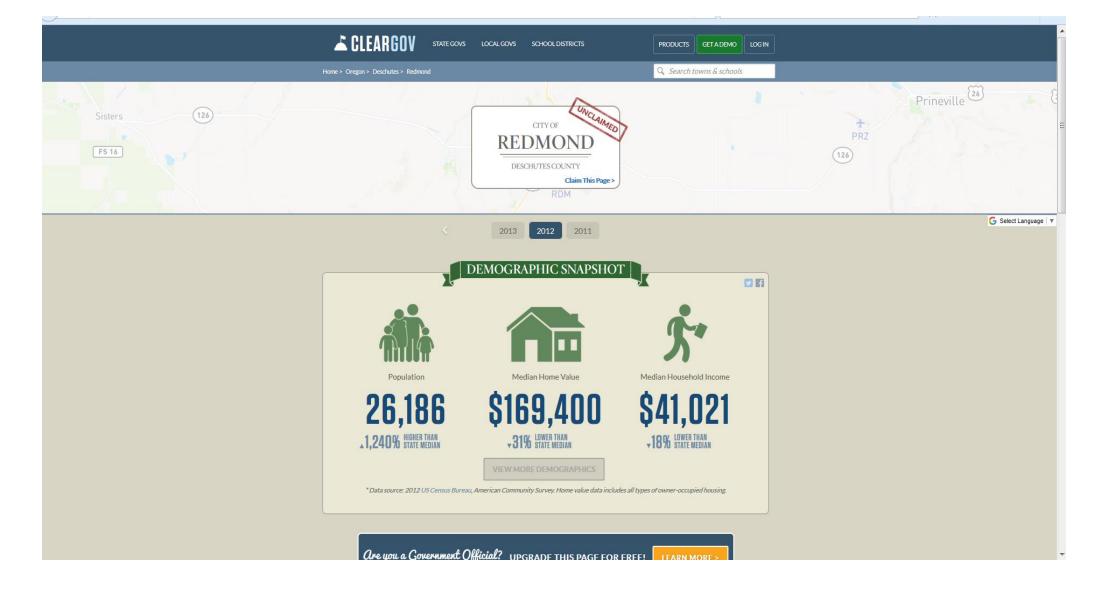


#### ACS Income

Pennsylvania State Data Ce Median Household Income Statewide Median = 354,895	inter	ucks County Id Income by Age \$60,000 \$80,000\$100,000	Mediar	vName Buck h Househol \$40,000	ld Income I	by Tenure \$80,000
Statewide Median = \$54,895	\$20,000 \$40,000					
Statewide Median = \$54,895		\$60,000 \$80,000\$100,000	\$0 \$20,000	\$40,000	\$60,000	\$90,000
	\$40,888					400,000
		\$87,309			\$79	9,559
dian Bolow Target		Un882677				\$94,823
Above Target 2X Target or Above	\$49,375	45 to 84 65 and over		\$43,010		Owner Occup     Rester Occup
Percent Below Poverty by Family Type		Per	cent Below Po	verty by A	ge	
Familias		Municipality	Under 5	5 to 17	18 to 64	65 and over
Families Families with Children		Bedminster township	12.5%	1.0%	3.9%	3.7%
Married Couples	21.9%	Bensalem township	11.3%	12.2%	8.2%	8.6%
Married Couples with Children		Bridgeton township	18.5%	17.3%	5.9%	10.6%
Female Householder		Bristol borough	24.6%	28.4%	13.1%	11.8%
Female Householder with Children 15.0%		Bristol township	16.9%	9.3%	8.7%	5.5%
10.078		Buckingham township	0.0%	3.6%	3.9%	4.8%
		Chalfont borough	0.0%	0.0%	1.4%	14.3%
		Doylestown borough	0.0%	2.8%	6.2%	6.5%
		Doylestown township	6.5%	1.7%	3.1%	5.4%
6.2%		Dublin borough	18.0%	10.6%	10.9%	8.4%
4.0%		Durham township	0.0%	12.8%	3.3%	0.0%
2.1% 2.5%		East Rockhill township	31.3%	13.0%	3.8%	8.8%
2.1%						

https://pasdc.hbg.psu.edu/Data/PaSDCDashboards/ACSIncome/tabid/1922/Default.aspx

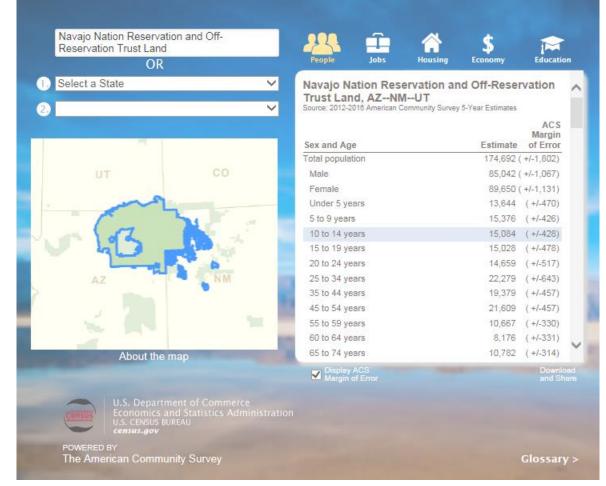




#### https://www.cleargov.com/

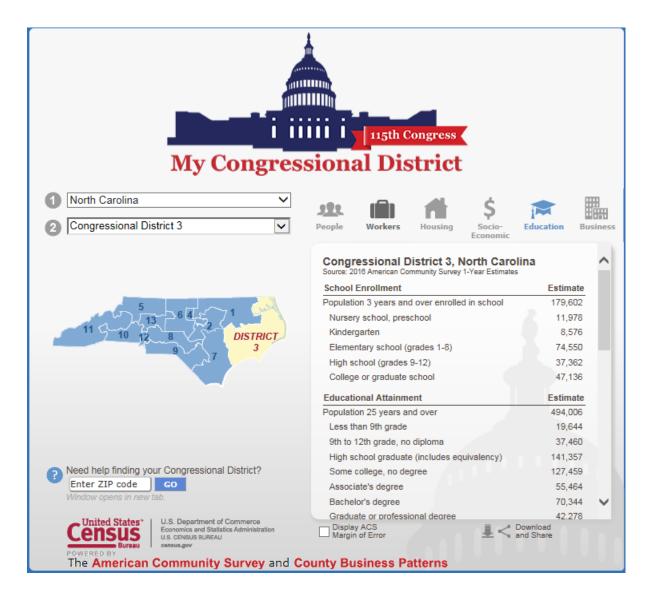


# My Tribal Area



#### https://www.census.gov/tribal/





#### https://www.census.gov/mycd/



#### Outline

- ACS and Census API Basics
- Using the API
- Building an API Request
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- Questions



# **Example: American Community Survey** data.census.gov

**POVERTY STATUS IN THE PAST 12 MONTHS BY SEX BY AGE** 

Universe: Population for whom poverty status is determined

Survey/Program: American Community Survey

This is a preview of the Census Bureau's new data exploration platform to be used to evaluate the look, feel, and functionality of our development. See Release Notes and FAOs for details. For official use. please continue to use our data resources at census.gov/data.html.

		United States	(	Alabama	)	Alaska	>	Arizona		Arkansas	>
<b><u>Census</u></b> B17001: POVERTY ST <b>Q</b>			Margin of		Margin of		Margin of		Margin of		Margin of
data.ce > T > B17001: POVERTY STATUS IN THE		Estimate	Error	Estimate	Error	Estimate	Error	Estimate	Error	Estimate	Error
	Total:	310,629,645	+/- 11,780	4,720,592	+/- 1,153	719,064	+/- 455	6,573,523	+/- 1,516	2,881,404	+/- 1,080
POVERTY STATUS IN THE PAST 12 MONTHS BY SEX BY AGE	Income in the past 12 months below poverty level:	46,932,225	+/- 284,072	868,666	+/- 11,290	72,826	+/- 2,617	1,165,636	+/- 11,825	542,431	+/- 8,531
Table ID: B17001 Universe: Population for whom poverty status is	Male:	21,012,839	+/- 136,034	375,139	+/- 5,586	34,847	+/- 1,455	540,034	+/- 6,596	242,209	+/- 4,579
determined	Under 5 years	2,349,027	+/- 24,515	43,317	+/- 1,337	4,037	+/- 392	59,903	+/- 1,752	29,219	+/- 1,309
Read Table Notes and Methodology	5 years	469,666	+/- 6,702	8,848	+/- 721	979	+/- 179	11,894	+/- 742	5,981	+/- 678
Switch Dataset:	6 to 11 years	2,656,041	+/- 27,475	50,183	+/- 1,856	4,360	+/- 410	70,032	+/- 1,513	32,412	+/- 1,387
2016 : ACS 5-Year Estimates Detailed Tables 👻	12 to 14 years	1,177,177	+/- 11,468	21,853	+/- 1,091	2,263	+/- 391	31,019	+/- 1,235	14,489	+/- 802
Transpose Table: 🔵	15 years	393,261	+/- 5,644	6,805	+/- 620	641	+/- 168	10,602	+/- 629	4,752	+/- 456
Show Margin of Error: 🗨	16 and 17 years	743,208	+/- 8,566	14,167	+/- 834	1,168	+/- 187	20,241	+/- 997	8,951	+/- 723
	18 to 24 years	3,076,564	+/- 20,370	53,676	+/- 1,733	4,674	+/- 389	78,737	+/- 2,245	33,371	+/- 1,264
	25 to 34 years	2,571,567	+/- 15,310	44,605	+/- 1,463	4,556	+/- 430	69,046	+/- 1,810	28,008	+/- 1,359
Add Geography	✓ 1 to 59 of 59 rows: ∧ ∨	2,067,813	+/- 15,925		+/- 1,272	3,559	+/- 354	54,303	+/- 1,57 <b>3</b>	to 10 of 106	columnsi < 🕽



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Table: B17001

X

# Output

https://api.census.gov/data/2016/acs/acs5 ?get=NAME,B17001\_002E,B17001\_002M&for=state:\*

### Returns data in json format that looks like this:

[["NAME","B17001\_002E","B17001\_002M","state"], ["Alabama","868666","11290","01"], ["Alaska","72826","2617","02"], ["Arizona","1165636","11825","04"], ["Arkansas","542431","8531","05"], Continued...



### Outline

- ACS Basics and Content
- Census API Basics
- Using the API
- Building an API Request
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- Questions?



# API Request – Four Easy Steps



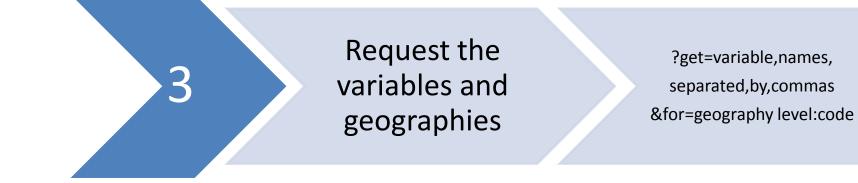
Identify the dataset you want to use https://api.census.gov/ data.html https://www.census.

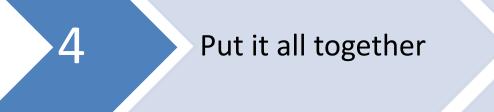
gov/developers/

2 Identify items needed Geography codes (usually FIPS)



# API Request – Four Easy Steps





https://api.census.gov/data/ 2016/acs/acs5?get=NAME, B17001\_002E,B17001\_002M &for=state:\*



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2016 : ACS 5-Year Estimates Detailed Tables 🛛 👻	12 to 14 years	1,177,177	+/- 11,468	21,853	+/- 1,091	2,263	+/- 391	31,019	+/- 1,235	14,489	+/- 80
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Table: B17001

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## API Discovery Tool https://api.census.gov/data.html

Census API: Datasets in /data/2016/acs/acs5 and its descendants

Title	Description	Vintage		Geography List		-	_	1 1	Developer Documentation	API Base URL
ACS 5-Year Detailed 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. Summary files include the following geographies: nation, all states (including DC and Puerto Rico), all metropolitan areas, all congressional districts (114th congress), all counties, all places, and all tracts and block groups. Summary files contain the most detailed cross-tabulations, many of which are published down to block groups. The data are population and housing counts. There are over 64,000 variables in this dataset.	2016	acs> acs5	geographies	variables	groups	<u>tags</u>	examples	documentation	https://api.census.gov /data/2016/acs/acs5
ACS 5-Year Comparison Profile	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. The comparison profiles include the following geographies: nation, all states (including DC and Puerto Rico), all metropolitan areas, all congressional districts, all counties and all places with a population of 5,000 or more. Comparison profiles are similar to data profiles but also include comparisons with past-year data. The current year data are compared with prior 5-Year data and include statistical significance testing. There are over 3,000 variables in this dataset.	2016	acs> acs5> cprofile	<u>geographies</u>	<u>variables</u>	groups	N/A	examples	documentation	https://api.census.gov /data/2016/acs/acs5 /cprofile
ACS 5-Year Data Profile	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. The data profiles include the following geographies: nation, all states (including DC and Puerto Rico), all metropolitan areas, all congressional districts, all counties, all places and all tracts. Data profiles contain broad social, economic, housing, and demographic information. The data are presented as both counts and percentages. There are over 2,400 variables in this dataset.	2016	acs > acs5 > profile	geographies	<u>variables</u>	groups	N/A	<u>examples</u>	documentation	https://api.census.gov /data/2016/acs/acs5 /profile
ACS 5-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. The subject tables include the following geographies: nation, all states (including DC and Puerto Rico), all metropolitan areas, all congressional districts, all counties, all places and all tracts. Subject tables provide an overview of the estimates available in a particular topic. The data are presented as both counts and percentages. There are over 66,000 variables in this dataset.	2016	acs > acs5 > subject	<u>geographies</u>	variables	groups	tags	<u>examples</u>	documentation	https://api.census.gov /data/2016/acs/acs5 /subject



# **Start Your Data Request**

#### https://api.census.gov/data/2016/acs/acs5?get= NAME,B17001\_002E,B17001\_002M&for=state:\*



Requests always begin with: https://api.census.gov/data



# **Add the Dataset Name**

### https://api.census.gov/data/2016/acs/acs5?get= NAME,B17001\_002E,B17001\_002M&for=state:\*



Find the dataset name at: https://api.census.gov/data/ 2016.html



## https://api.census.gov/data/2016/acs/acs5.html

#### Census API: Datasets in /data/2016/acs/acs5 and its descendants

Title	Description	Vintage		Geography List		-	-		Developer Documentation	API Base URL
ACS 5-Year Detailed 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. Summary files include the following geographies: nation, all states (including DC and Puerto Rico), all metropolitan areas, all congressional districts (114th congress), all counties, all places, and all tracts and block groups. Summary files contain the most detailed cross-tabulations, many of which are published down to block groups. The data are population and housing counts. There are over 64,000 variables in this dataset.	2016	acs> acs5	geographies	<u>variables</u>	groups	<u>tags</u>	examples	documentation	https://api.census.gov /data/2016/acs/acs5
ACS 5-Year Comparison Profile	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. The comparison profiles include the following geographies: nation, all states (including DC and Puerto Rico), all metropolitan areas, all congressional districts, all counties and all places with a population of 5,000 or more. Comparison profiles are similar to data profiles but also include comparisons with past-year data. The current year data are compared with prior 5-Year data and include statistical significance testing. There are over 3,000 variables in this dataset.	2016	acs> acs5> cprofile	<u>geographies</u>	<u>variables</u>	<u>groups</u>	N/A	<u>examples</u>	documentation	<u>https://api.census.gov</u> /data/2016/acs/acs5 /cprofile
ACS 5-Year Data Profile	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. The data profiles include the following geographies: nation, all states (including DC and Puerto Rico), all metropolitan areas, all congressional districts, all counties, all places and all tracts. Data profiles contain broad social, economic, housing, and demographic information. The data are presented as both counts and percentages. There are over 2,400 variables in this dataset.	2016	acs> acs5> profile	geographies	<u>variables</u>	groups	N/A	<u>examples</u>	<u>documentation</u>	https://api.census.gov /data/2016/acs/acs5 /profile
ACS 5-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. The subject tables include the following geographies: nation, all states (including DC and Puerto Rico), all metropolitan areas, all congressional districts, all counties, all places and all tracts. Subject tables provide an overview of the estimates available in a particular topic. The data are presented as both counts and percentages. There are over 66 000 variables in this dataset.	2016	acs > acs5 > subject	geographies	<u>variables</u>	groups	<u>tags</u>	<u>examples</u>	<u>documentation</u>	https://api.census.gov /data/2016/acs/acs5 /subject



# **Start Your Variable Request**

https://api.census.gov/data/2016/acs/acs5**?get=** NAME,B17001\_002E,B17001\_002M&for=state:\*



Always start your variable request with ?get=



# **Add Your Variables**

### https://api.census.gov/data/2016/acs/acs5?get= NAME,B17001\_002E,B17001\_002M&for=state:\*



Find the variables you want here:

https://api.census.gov/ data/2016/acs/acs5/ variables.html



# https://api.census.gov/data/2016/acs/acs5 /variables.html

€ 🗲 🛈 🔒	https://api.census.gov/data/2016/acs/acs5/variables.html	80% C	<b>Q</b> Search			☆ 🖻	1	r 🛡
				B10010 04/EA	1		1	1
<u>16010_048E</u>	Estimate!!Total!!Bachelor's degree or higher!!Not in labor force	EDUCATIONAL ATTAINMENT AND EMPLOYMENT STATUS BY LANGUAGE SPOKEN AT HOME FOR THE POPULATION 25 YEARS AND OVER	not required	B16010 048M, B16010 048MA, B16010 048EA	0	int	<u>B16010</u>	N/A
<u>16010_049E</u>	Estimate!!Total!!Bachelor's degree or higher!!Not in labor force!!Speak only English	EDUCATIONAL ATTAINMENT AND EMPLOYMENT STATUS BY LANGUAGE SPOKEN AT HOME FOR THE POPULATION 25 YEARS AND OVER	not required	B16010 049M, B16010 049MA, B16010 049EA	0	int	<u>B16010</u>	N/A
16010 050E	Estimate!!Total!!Bachelor's degree or higher!!Not in labor force!!Speak Spanish	EDUCATIONAL ATTAINMENT AND EMPLOYMENT STATUS BY LANGUAGE SPOKEN AT HOME FOR THE POPULATION 25 YEARS AND OVER	not required	B16010 050M, B16010 050MA, B16010 050EA	0	int	<u>B16010</u>	N/A
<u>16010_051E</u>	Estimatel!Total!!Bachelor's degree or higher!!Not in labor force!!Speak other Indo-European languages	EDUCATIONAL ATTAINMENT AND EMPLOYMENT STATUS BY LANGUAGE SPOKEN AT HOME FOR THE POPULATION 25 YEARS AND OVER	not required	B16010 051M, B16010 051MA, B16010 051EA	0	int	<u>B16010</u>	N/A
<u>16010 052E</u>	Estimatel!Total! Bachelor's degree or higher!!Not in labor force!!Speak Asian and Pacific Island languages	EDUCATIONAL ATTAINMENT AND EMPLOYMENT STATUS BY LANGUAGE SPOKEN AT HOME FOR THE POPULATION 25 YEARS AND OVER	not required	B16010 052M, B16010 052MA, B16010 052EA	0	int	<u>B16010</u>	N/A
<u>16010_053E</u>	Estimatel!Total!!Bachelor's degree or higher!!Not in labor force!!Speak other languages	EDUCATIONAL ATTAINMENT AND EMPLOYMENT STATUS BY LANGUAGE SPOKEN AT HOME FOR THE POPULATION 25 YEARS AND OVER	not required	B16010 053M, B16010 053MA, B16010 053EA	0	int	<u>B16010</u>	N/A
17001 001E	Estimate!!Total	POVERTY STATUS IN THE PAST 12 MONTHS BY SEX BY AGE	not required	B17001 001M, B17001 001MA, B17001 001EA	0	int	<u>B17001</u>	N/A
<u>17001 002E</u>	Estimate!!Total!!Income in the past 12 months below poverty level	POVERTY STATUS IN THE PAST 12 MONTHS BY SEX BY AGE	not required	B17001 002M, B17001 002MA, B17001 002EA	0	int	<u>B17001</u>	N/A
17001 003E	Estimatel!Total!Income in the past 12 months below poverty level!!Male	POVERTY STATUS IN THE PAST 12 MONTHS BY SEX BY AGE	not required	B17001 003M, B17001 003MA, B17001 003EA	0	int	<u>B17001</u>	N/A
17001 004 <u>E</u>	Estimate!!Total!!Income in the past 12 months below poverty level!!Male!!Under 5 years	POVERTY STATUS IN THE PAST 12 MONTHS BY SEX BY AGE	not required	B17001 004M, B17001 004MA, B17001 004EA	0	int	<u>B17001</u>	N/A
17001 005 <u>E</u>	Estimatel!Total!!Income in the past 12 months below poverty level!!Male!!5 years	POVERTY STATUS IN THE PAST 12 MONTHS BY SEX BY AGE	not required	B17001 005M, B17001 005MA, B17001 005EA	0	int	<u>B17001</u>	N/A
<u>17001_006E</u>	Estimate!!Total!!Income in the past 12 months below poverty level!!Male!!6 to 11 years	POVERTY STATUS IN THE PAST 12 MONTHS BY SEX BY AGE	not required	B17001 006M, B17001 006MA, B17001 006EA	0	int	<u>B17001</u>	N/A
17001_007E	Estimatel!Total!!Income in the past 12 months below poverty level!!Male!!12 to 14 years	POVERTY STATUS IN THE PAST 12 MONTHS BY SEX BY AGE	not required	B17001 007M, B17001 007MA, B17001 007EA	0	int	<u>B17001</u>	N/A
				B17001_008M	1			



# Add Your Geography

https://api.census.gov/data/2016/acs/acs5?get= NAME,B17001\_002E,B17001\_002M&for=state:\*



Find available geographies here:

https://api.census.gov/ data/2016/acs/acs5/ geography.html



#### https://api.census.gov/data/2016/acs/acs5/ geography.html

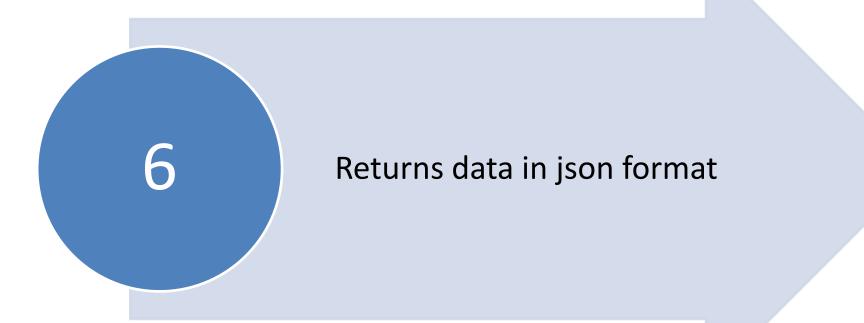
Census Data API: FIPS Geographies in /data/2016/acs/acs5/geography

	Geography		
Reference Date	Level	Geography Hierarchy	Limit
2015-01-01	010	us	
2015-01-01	020	region	
2015-01-01	030	division	
2015-01-01	040	state	
2015-01-01	050	state> county	
2015-01-01	060	state> county> county subdivision	
2015-01-01	140	state> county> tract	
2015-01-01	160	state> place	
2015-01-01	230	state> alaska native regional corporation	
2015-01-01	250	american indian area/alaska native area/hawaiian home land	
2015-01-01	310	metropolitan statistical area/micropolitan statistical area	
2015-01-01	330	combined statistical area	
2015-01-01	350	new england city and town area	
2015-01-01	400	urban area	
2015-01-01	500	state> congressional district	
2015-01-01	950	state> school district (elementary)	
2015-01-01	960	state> school district (secondary)	
2015-01-01	970	state> school district (unified)	
2015-01-01	155	state> place> county	
2015-01-01	070	state> county> county subdivision> place remainder	
2015-01-01	150	state> county> tract> block group	
2015-01-01	795	state> public use microdata area	
2015-01-01	860	zip code tabulation area	
2015 01 01	610	tata. stata lanislativa district (unper abamber)	



# **Put it all Together**

### https://api.census.gov/data/2016/acs/acs5?get= NAME,B17001\_002E,B17001\_002M&for=state:\*





# Output

https://api.census.gov/data/2016/acs/acs5 ?get=NAME,B17001\_002E,B17001\_002M&for=state:\*

[["NAME","B17001\_002E","B17001\_002M","state"], ["Alabama","868666","11290","01"], ["Alaska","72826","2617","02"], ["Arizona","1165636","11825","04"], ["Arkansas","542431","8531","05"],

Continued...



# **Groups Functionality**

- Pull More Than 50 Variables with One Call
- Groups for 2016 ACS5

https://api.census.gov/data/2016/acs/acs5/groups.html

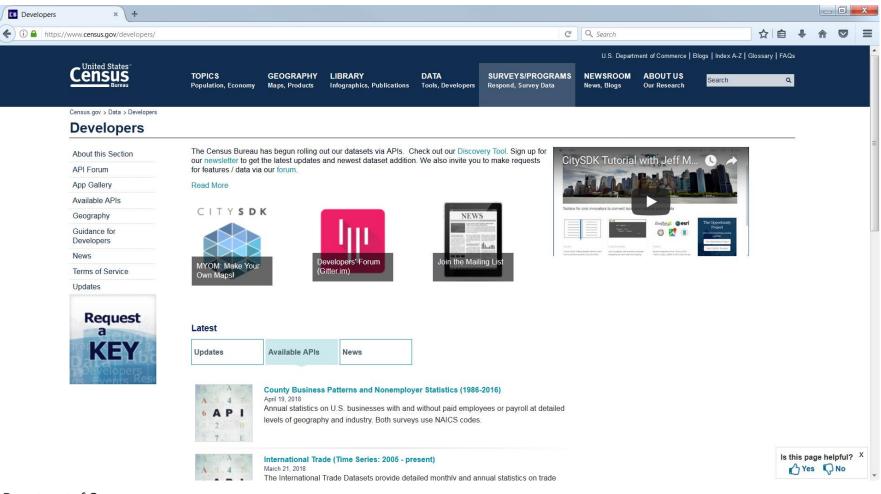
• Example for ACS5: Group B17001

https://api.census.gov/data/2016/acs/acs5?get=group(B17001)&for=us:\*

• All variable names will appear first followed by all the values in the output



### Stay Connected: The Developers Page www.census.gov/developers/





## **Available APIs for ACS**

#### www.census.gov/data/developers/data-sets.html

	ww.census.gov/data/develop		C Q Search	☆□	+	
_	s.gov > Data > Developers > Ava	ilable APIs				
Dev	velopers				_	
Abou	ut this Section	Available APIs				
API F	Forum	We plan on adding more of our publicly available datasets. Here you'll find which	h of our many data sets are currently available via API. To make			
App (	Gallery	specific requests for the release of datasets, please sign up and submit your req				
Avail	lable APIs	NEW: We now have a machine-readable dataset discovery service available in t	beta release. Visit our Discovery Tool page to learn more.			
Geor	graphy	Page 1 of 2 >				
	lance for elopers	American Community Survey 1-Year Data (2011-2016) September 14, 2017				
News	S	Areas with populations of 65,000+. Covers a broad range of topics about social,	economic, demographic, and housing characteristics of the U.S.			
Terms	ns of Service	population.				
Upda	ates	American Community Survey 3 Year Data (2012-2013) September 15, 2016				
	a <b>KEY</b>	American Community Survey 5-Year Data (2009-2016)           September 15, 2016           Data available down to the block-group level. Covers a rar characteristics of the U.S. population.	nge of topics about social, economic, demographic, and housing			
		American Community Survey Migration Flows (2009-2015) September 15, 2016 Migration flows between counties, minor civil divisions, and metropolitan areas u characteristics.	using ACS 5-year data. Flows are crossed by selected			
		American Community Survey Supplemental (2014 - 2016) October 20, 2017 High-level detailed tables tabulated on the 1-year microdata for geographies with	h populations of 20,000 or more.			
		Annual Survey of Entrepreneurs August 17, 2017 August 17, 2017 The ASE provides more timely updates on the status, nature businesses.	ure, and scope of women-, minority-, and veteran-owned		this pag	



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# **Available APIs for ACS**

- ACS 1-Year Data (2011-2016)
- ACS 3-Year Data (2012-2013)
- ACS 5-Year Data (2009-2016)
- ACS Migration Flows (2009-2015)
- Supplemental (2014-2016)



## Outline

- ACS and Census API Basics
- Using the API
- Building an API Request
- API Demo
- Resources for Learning More
- Stay in Touch
- Questions



## **Live Demo**

- For all parishes in Louisiana, what percent of people/households:
  - Have a disability
  - Have income below the poverty level
  - Do not have a vehicle at home



# Example: Disability, Poverty, and Vehicle Availability for all Louisiana Parishes

Select Your Dataset On The Developers Page

APIs × +						
nttps://www. <b>census.gov</b> /data/developers/d	ata-sets.html	(133%)	C Q Search	☆自	÷	
Census.gov > Data > Develope	rs > Available APIs					
Developers						
About this Section	Available APIs					
API Forum		American Community Survey 1-Year Data (2011-2016) September 14, 2017 Areas with populations of 65,000+. Covers a broad range of topics about social, economic, demographic, and				
App Gallery						
Available APIs						
Geography	housing characteristics of the U.S. popul	housing characteristics of the U.S. population.				
Guidance for Developers	American Community Survey 3 Year I September 15, 2016	Data (2012-2013) ers a broad range of topics about social, eco	nomia domographia and			
News	housing characteristics of the U.S. popul		nomic, demographic, and			
Terms of Service		unity Survey 5-Year Data (2009-2016)				
Updates	September 15, 2016					
Request		vn to the block-group level. Covers a range or raphic, and housing characteristics of the U.S				

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## Choose Type of Table/Profile

#### Select "Examples and Supported Geography"

About this Section	America	n Communi	ty Survey 5-	Year Data (2	009-2016)		<b>Related Information</b>
API Forum				· - ··· - ···· <b>(</b> -			
App Gallery	2016	2015	2014	2013	2012	•	
Available APIs							
Geography	Detailed 1	Tables:					
Guidance for Developers	<ul><li>API Ca</li><li>2016 A</li></ul>		es Variables [ html	xml   json ]			
News	ACS Te	echnical Documer	itation				
Terms of Service	Examp	les and Supported	d Geography				
Updates	Subject Ta API Ca						
Request	ACS Te	CS Subject Table echnical Documer les and Supported		xml   json ]			
KEY	Data Prof	iles:					
as Events Re	■ 2016 A	CS Data Profiles	Variables [ html   x	(ml   json ]			
	- ACS Te	echnical Documer	tation				
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census.gov/data/developers/data-sets/acs-5year.html

#### Select "examples"

<del>(</del> ) () (	https://api. <b>census.gov</b> /data/2016/acs/acs5/profile.html				୯ ୧	Search				☆	<b>é</b> 1	•		
	Census API: Datasets in	/data/201	6/acs/acs5	i/profile and it	s descenda	ints								
Title	Description		Dataset	Geography	Variable	Group			Developer Document:			Base U	DI	
ACS 5-Year Data Profile	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. The data profiles include the following geographies: nation, all states (including DC and Puerto Rico), all metropolitan areas, all congressional districts, all counties, all places and all tracts. Data profiles contain broad social, economic, housing,	2016	acs> acs5> profile					examples			https:	//api.ce 2016/a	nsus.g	

https://api.census.gov/data/2016/acs/acs5/profile.html



 Choose Your Geography – Explore the available geographic levels on the left, copy a sample URL, and open a new tab

Census Data API: /data/2016/acs × +								
🗲 🛈 🖨 🔒 https://api	i.census.gov/data/2016/acs/acs5/profile/examples.html							
Geography Hierarchy	Example URL							
110	https://api.census.gov/data/2016/acs/acs5/profile?get=DP04_0001E,NAME&for=us:*&key=YOUR_KEY_GOES_HERE							
us	https://api.census.gov/data/2016/acs/acs5/profile?get=DP04_0001E,NAME&for=us:1&key=YOUR_KEY_GOES_HERE							
state	https://api.census.gov/data/2016/acs/acs5/profile?get=DP04_0001E,NAME&for=state:*&key=YOUR_KEY_GOES_HERE							
state	https://api.census.gov/data/2016/acs/acs5/profile?get=DP04_0001E,NAME&for=state:01&key=YOUR_KEY_GOES_HERE							
	https://api.census.gov/data/2016/acs/acs5/profile?get=DP04_0001E,NAME&for=county:*&key=YOUR_KEY_GOES_HERE							
state > county	https://api.census.gov/data/2016/acs/acs5/profile?get=DP04_0001E,NAME&for=:*∈=state:*&key=YOUR_KEY_GOES_HERE							
state / county	https://api.census.gov/data/2016/acs/acs5/profile?get=DP04_0001E,NAME&for=county:013∈=state:02& key=YOUR_KEY_GOES_HERE							
	https://api.census.gov/data/2016/acs/acs5/profile?get=DP04_0001E.NAME&for=countv%20subdivision:*∈=state:36&							

https://api.census.gov/data/2016/acs/acs5/profile/examples.html



- Paste A Sample URL Into The Address Bar
- Enter Your API Key Or Delete "&key=YOUR\_KEY\_GOES\_HERE"
- Press Enter And View Results



https://api.census.gov/data/2016/acs/acs5/profile?get=DP04\_0001E,NAME&for=county:013&in=state:02



 Edit Geography Selection To Retrieve All Louisiana Parishes – In this example, use a wildcard (\*) for county and code 22 for state

Census Data API: /data/2016/acs × https://api.censty:*∈=state:22 × +								
( https://api.census.gov/data/2016/acs/acs5/profile?get=DP04_0001E,NAME&for=county:*∈=state:22								
[["DP04 0001E","NAME","state","county"],								
["25867","Acadia Parish, Louisiana","22","001"],								
["9782","Allen Parish, Louisiana","22","003"],								
["44127","Ascension Parish, Louisiana","22","005"],								
["10502","Assumption Parish, Louisiana","22","007"],								
["18184","Avoyelles Parish, Louisiana","22","009"],								
["15220","Beauregard Parish, Louisiana","22","011"],								
["7721" "Dienville Damigh Louigiana" "22" "012"]								

https://api.census.gov/data/2016/acs/acs5/profile?get=DP04\_0001E,NAME&for=county:\*&in=state:22



## • Find Your Variables: Click variables from the dataset page

Census D	Data API: /data/2016/acs × https://api.censty:*∈=state:22 × +													
<b>()</b>	(i)  ▲ https://api.census.gov/data/2016/acs/acs5/profile.html						C	Q Search		☆   I	ê 4			Ξ
Title	Census API: Da	tasets in / Vintage	Dataset	Geography	Variable	Group	Tag	Examples	Develope		API	Base U	RL	
ACS 5-Year Data Profile	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. The data profiles include the following geographies: nation, all states (including DC and Puerto Rico), all metropolitan areas, all congressional districts, all counties, all places and all tracts. Data profiles contain broad social, economic, housing, and demographic information. The data are presented as both counts and percentages. There are over 2,400 variables in this dataset.	2016	acs> acs5> profile	geographies			N/A		document		https	://api.ce	ensus.s	

https://api.census.gov/data/2016/acs/acs5/profile.html



Find Your Variables (cont.): Search the webpage (CTRL+F) to find your variable(s) of interest, such as DP02\_0071PE, the percent of the population with a disability

Census Data API: /data/2016/acs × https://api.censME&for=state:22 × +							
🗲 🛈 🔒 🛛 https://aj	pi. <b>census.gov</b> /data/2016/acs/acs5/profile/variables.html						
<u> </u>							
DP02_0070E	Estimate!!DISABILITY STATUS OF THE CIVILIAN NONINSTITUTIONALIZED POPULATION!!Total Civilian Noninstitutionalized Population	SELECTED SOC CHARACTERIS UNITED STATE					
DP02_0070PE	Percent!!DISABILITY STATUS OF THE CIVILIAN NONINSTITUTIONALIZED POPULATION!!Total Civilian Noninstitutionalized Population	SELECTED SOC CHARACTERIS UNITED STATES					
DP02_0071E	Estimate!!DISABILITY STATUS OF THE CIVILIAN NONINSTITUTIONALIZED POPULATION!!Total Civilian Noninstitutionalized Population!!With a disability	SELECTED SOC CHARACTERIS UNITED STATE					
DP02_0071PE	Percent!!DISABILITY STATUS OF THE CIVILIAN NONINSTITUTIONALIZED POPULATION Total Civilian Noninstitutionalized Population!!With a disability	SELECTED SOC CHARACTERIS UNITED STATE					
tps://api.census.gov/da	ta/2016/acs/acs5/profile/variables/DP02_0071E.json	SELECTED SOC					
disability All Match Case Whole Words 1 of 48 matches Reached end of page, continued from top							

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census.gov

- Update Query With Variable Of Interest, DP02\_0071PE
- View Results Approximately 18% of the population in Acadia Parish, Louisiana has a disability

Census Data API: /data/2016/acs × https://api.censty:*∈=state:22 × +
( https://api.census.gov/data/2016/acs/acs5/profile?get=DP02_0071PE,NAME&for=county:*∈=state:22
[["DP02_0071PE","NAME","state","county"],
["18.0", "Acadia Parish, Louisiana", "22", "001"],
["22.0","Allen Parish, Louisiana","22","003"],
["11.6","Ascension Parish, Louisiana","22","005"],
<pre>["19.6","Assumption Parish, Louisiana","22","007"],</pre>
["18 2" "Avovelles Parish Touisiana" "22" "000"]

https://api.census.gov/data/2016/acs/acs5/profile?get=DP02\_0071PE,NAME&for=county:\*&in=state:22



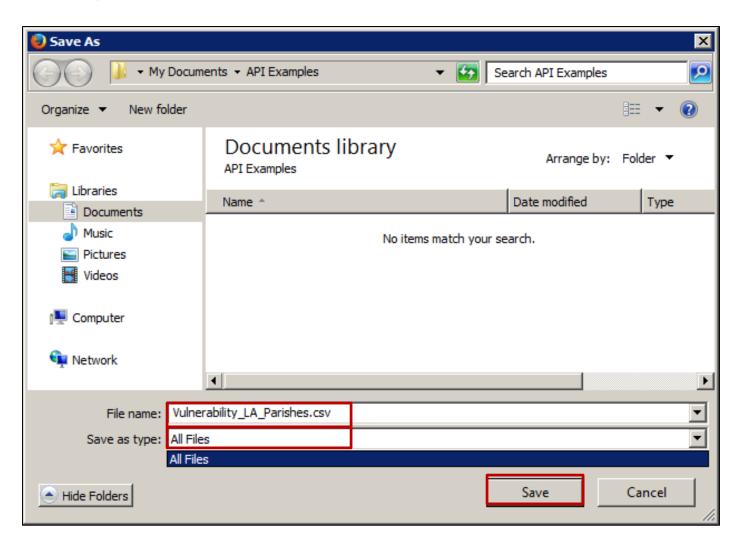
- Add Additional Variables Of Interest DP03\_0128PE, DP04\_0058PE
- Save Results In this example, right click the page and select Save Page As

Census Data API: /data/2016/acs × https://api.censty:*∈=state:22 × +	
(https://api.census.gov/data/2016/acs/acs5/profile?get=DP02_0071PE,DP03_0128PE,DP04_0058PE,IAME&for=county:*∈=state:22	C Q Sea
<pre>[["DP02_0071PE","DP03_0128PE","DP04_0058PE","NAME","state","county"], ["18.0","20.6","7.7","Acadia Parish, Louisiana","22","001"],</pre>	<b>€ → ሮ</b> ☆
<pre>["22.0","15.9","8.2","Allen Parish, Louisiana","22","003"], ["11.6","11.5","3.7","Ascension Parish, Louisiana","22","005"], ["19.6","18.4","7.7","Assumption Parish, Louisiana","22","007"],</pre>	Save Page As Save Page to Pocket
<pre>["18.2","23.1","9.4","Avoyelles Parish, Louisiana","22","009"], ["21.0","19.0","5.2","Beauregard Parish, Louisiana","22","011"], ["20.7","25.0","10.5","Bienville Parish, Louisiana","22","013"],</pre>	Vie <u>w</u> Background Image Select <u>A</u> ll
<pre>["12.5","15.5","5.1","Bossier Parish, Louisiana","22","015"], ["15.1","22.4","10.6","Caddo Parish, Louisiana","22","017"], ["16.6","17.2","6.9","Calcasieu Parish, Louisiana","22","019"],</pre>	View Page Source View Page Info Inspect Element (Q)

https://api.census.gov/data/2016/acs/acs5/profile?get=DP02\_0071PE,DP03\_0128PE,DP04\_0058PE,NAME &for=county:\*&in=state:22



 Save As .csv – Add .csv to the end of your filename and select All Files from the Save as type dropdown menu





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#### • Open .csv In Excel – Each variable has its own column for easy viewing

₽	5- ೇ ∓			Vulnerability_LA_Parishes - Excel		Ē	- 0 ×
File	Home Insert Page Layou	ut Formulas Data	Review View Add-ins	HP ALM HP ALM Upload Add-in ACROBAT Q Tell me.	Tyson	Weister (CENSUS/ACS	O FED) 🧏 Share
Paste	Cut Calibri Calibri B I U → Format Painter Clipboard G Fo	- <u>\</u> - <u>A</u> - = =	See	General     Image: Conditional Format as Cell Formatting ▼ Table ▼ Styles ▼     Image: Conditional Format as Cell Formatting ▼ Table ▼ Styles ▼     Image: Conditional Format as Cell Formatting ▼ Table ▼ Styles ▼	rt Delete Format	utoSum • Average values and a second	nd &
A1	▼ : × √ f <sub>x</sub>	[["DP02_0071PE"					
	А	В	С	D	E	F	G
1	[["DP02_0071PE"	DP03_0128PE	DP04_0058PE	NAME	state	county]	
2	["18.0"	20.6	7.7	Acadia Parish, Louisiana	22	001]	
3	["22.0"	15.9	8.2	Allen Parish, Louisiana	22	003]	
4	["11.6"	11.5	3.7	Ascension Parish, Louisiana	22	005]	
5	["19.6"	18.4	7.7	Assumption Parish, Louisiana	22	007]	
6	["18.2"	23.1	9.4	Avoyelles Parish, Louisiana	22	009]	
7	["21.0"	10	E 2	Requiregard Dariah Louisiana		0111	



Format As Desired

 In this example, use Excel's Find and Replace.
 Copy the open bracket [, paste into find what, and select Replace All.
 Repeat this step for the quote " and closed bracket ]

日	€ਾ ∂ਾ ∓		Vulner	ability_LA_Parishes - Excel			-	3 – C X
File	Home Insert Page	Layout Formulas Data	Review View Add-ir	ns HP ALM HP ALM Upl	oad Add-in ACROBAT	♀ Tell me Ty	son Weister (CEI	NSUS/ACSO 🞗 Share
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A1	▼ E × ✓	fx [["DP02_0071PE"						<u>R</u> eplace
	А	В	С		D		E	<u>G</u> o To Go To <u>S</u> pecial
1	[["DP02_0071PE	" DP03_0128PE	DP04_0058PE	NAME			state	Form <u>u</u> las
2	["18.0"	Find and Replace	1	? ×	ouisiana			Co <u>m</u> ments <u>C</u> onditional Formatting
3	["22.0"	Find Replace		<b></b>	uisiana			Co <u>n</u> stants
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7	["21.0"		4 <b>5</b> /	/ Realizedaro Par	ish Louisiana			22 0111



 Run API Query To Get A List Output Containing All Variables In The 2016 Data Profiles – Delete .html from the webpage you pulled the variables from to run the query. Save as results as .csv.

https://api.censusprofile/variables × https://api.censME&for=state:22 × +	
(i) https://api.census.gov/data/2016/acs/acs5/profile/variables	🕄 🔍 Search 🔝 🏠 🖨 🔮 着
[["name", "label", "concept"], ["for", "Census API FIPS 'for' clause", "Census API Geo ["in", "Census API FIPS 'in' clause", "Census API Geo ["DP02_0068PE", "Percent!!VETERAN STATUS!!Civilian p over", "SELECTED SOCIAL CHARACTERISTICS IN THE UNITH ["DP04_0009E", "Estimate!!UNITS IN STRUCTURE!!Total HOUSING CHARACTERISTICS"], ["DP03_0123E", "Estimate!!PERCENTAGE OF FAMILIES AND MONTHS IS BELOW THE POVERTY LEVEL!!Married couple for the householder under 18 years", "SELECTED ECONOMIC	ography Specification"], population 18 years and ED STATES"], housing units!!2 units","SELECTED D PEOPLE WHOSE INCOME IN THE PAST 12 families!!With related children of

https://api.census.gov/data/2016/acs/acs5/profile/variables



#### Copy And Paste List Of Variables Into A New Worksheet In Vulnerability\_LA\_Parishes.csv

B	• • ∂	* ∓					Vulnerab	ility_LA_Pa	rishes - Excel						দ্র	_		×
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3	DP02_0	0001PE	Percent!	<b>HOUSE</b>	HOLDS	BY TY	PE!!To	tal ho	useholds				SELE	CTED S	OCIAL	CHA	RACT	ER
4	DP02_0	0002E	Estimate	IIHOUSI	HOLD	S BY T	YPE!!To	otal ho	usehold	s‼Fa	amily ho	useho	SELE	CTED S	OCIAL	CHA	RACT	ER
5	DP02_0	0002PE	Percent!	HOUSE	HOLDS	ΒΥ ΤΥ	PE!!To	tal ho	useholds	!!Fai	mily hou	seholo	SELE	CTED S	OCIAL	CHA	RACT	ER
6	DP02_0	0003E	Estimate	IIHOUSI	HOLD	S BY T	YPE!!To	otal ho	usehold	s‼Fa	amily ho	useho	SELE	CTED S	OCIAL	CHA	RACT	ER
7			ty_LA_Parishes	Sheet1	÷	<del>RV TV</del>	DEHTA	<del>Isl hra</del>	<del>lezholde</del>	HE	enile herri ∢	<del>cahrdr</del>	I CEI E	CTED S		∩⊔∆	RACT	<b></b>



#### • Use VLOOKUP Function To Pull Matching Variable Labels Into Table

- Insert new row for row 2
- Type =VLOOKUP(
- Click cell A1 and type a comma (,). This tells Excel you want to find a match for DP02\_0071PE

A2	- : × - :	f∗ =VLOOKUP(A1,				*
	А	VLOOKUP(lookup_v	alue, table_array, col_index_r	num, [range_lookup]} D	E	F
1	DP02_0071PE	DP03_0128PE	DP04_0058PE	NAME	state	county
2	=VLOOKUP(A1,					
3	18	20.6	7.7	Acadia Parish, Louisiana	22	1
4	22	15.9	8.2	Allen Parish, Louisiana	22	3
5	11.6	11.5	3.7	Ascension Parish, Louisiana	22	5
6	19.6	18.4	7.7	Assumption Parish, Louisiana	22	7
7	18.2	23.1	9.4	Avoyelles Parish, Louisiana	22	9
	Vulnerability_LA_P	Parishes Sheet1	÷	: 4		•



## • Use VLOOKUP Function (continued)

- Click Sheet 1 to open the worksheet with the variable names and labels
- Select all contents of this table. This tells Excel to look for a match for DP02\_0071PE somewhere in this table.
- Press F4 one time to lock the location and enter a comma (,).

A1	* : × v	/ <i>f</i> <sub>x</sub> =VLOOKUP(A1,Sheet1!\$A\$1:\$C\$1337		~
	А	VLOOKUP(lookup_value, <b>table_array</b> , col_index_num, [range_lookup])	С	
1	name	label	concept	
2	DP02_0001E	Estimate!!HOUSEHOLDS BY TYPE!!Total households	SELECTED SOCIAL CHARACTE	.R
3	DP02_0001PE	Percent!!HOUSEHOLDS BY TYPE!!Total households	SELECTED SOCIAL CHARACTE	R
4	DP02_0002E	Estimate!!HOUSEHOLDS BY TYPE!!Total households!!Family househol	SELECTED SOCIAL CHARACTE	R
5	DP02_0002PE	Percent!!HOUSEHOLDS BY TYPE!!Total households!!Family household	SELECTED SOCIAL CHARACTE	R
6	DP02_0003E	Estimate!!HOUSEHOLDS BY TYPE!!Total households!!Family househol	SELECTED SOCIAL CHARACTE	R
7	DD02 0003DE	Percentil UOUSELIOLDS BY TYPE II Total households II Femily household	SELECTED SOCIAL CHARACTE	<b>-</b>
-	Vulnerability_	LA_Parishes Sheet1 🕀 : 🕨		►



## • Use VLOOKUP Function (continued)

Enter a 2 and then a comma (,). This tells Excel pull the corresponding label in column B when it finds a matching variable name in the table.

IF	* : × v	/ <i>f</i> <sub>*</sub> =VLOOKUP(A1,Sheet1!\$A\$1:\$C\$1337,2	~
	А	VLOOKUP(lookup_value, table_array, col_index_num, [range_lookup])	C
1	name	label	concept
2	DP02_0001E	Estimate!!HOUSEHOLDS BY TYPE!!Total households	SELECTED SOCIAL CHARACTER
3	DP02_0001PE	Percent!!HOUSEHOLDS BY TYPE!!Total households	SELECTED SOCIAL CHARACTER
4	DP02_0002E	Estimate!!HOUSEHOLDS BY TYPE!!Total households!!Family househol	SELECTED SOCIAL CHARACTER
5	DP02_0002PE	Percent!!HOUSEHOLDS BY TYPE!!Total households!!Family household	SELECTED SOCIAL CHARACTER
6	DP02_0003E	Estimate!!HOUSEHOLDS BY TYPE!!Total households!!Family househol	SELECTED SOCIAL CHARACTER
7	Vulnerability	PercentIIHOUSEHOUDS BY TYPEUTotal householdsUEamily household LA_Parishes Sheet1 +	



## Use VLOOKUP Function (continued)

Enter 0) and press enter to specify that you want exact matches only, and to complete the VLOOKUP function.

A133	32 🔹 : 🗙 🗸	′ <i>f</i> <sub>*</sub> =VLOOKUP(A1,Sheet1!\$A\$1:\$C\$1337, <mark>1</mark> ,0)	~
	А	В	C
1	name	label	concept
2	label	Estimate!!HOUSEHOLDS BY TYPE!!Total households	SELECTED SOCIAL CHARACTER
3	DP02_0001PE	Percent!!HOUSEHOLDS BY TYPE!!Total households	SELECTED SOCIAL CHARACTER
4	DP02_0002E	Estimate!!HOUSEHOLDS BY TYPE!!Total households!!Family househol	SELECTED SOCIAL CHARACTER
5	DP02_0002PE	Percent!!HOUSEHOLDS BY TYPE!!Total households!!Family household	SELECTED SOCIAL CHARACTER
6	DP02_0003E	Estimate!!HOUSEHOLDS BY TYPE!!Total households!!Family househol	SELECTED SOCIAL CHARACTER
7	DDO2 OOO3DE Vulnerability_	PercentIIHOUSEHOUDS BY TYPEIITotal households IEamily household LA_Parishes Sheet1 +	

- Drag The Function From Cell A2 To Cells B2 & C2
- View Your Variable Labels And Table

E	<u>চিন্টন =</u>	Vulnerability_	LA_Parishes - Excel	Ē	~	o x
Fi	e Home Insert Page Layout Formu	as Data Review View Add-ins	HP ALM HP ALM Upload Add-in	ACROBAT 🛛 Tell me Tyson Weiste	er (CEN	₽ Share
Pas		E = ≫ · E Wrap Text Ger E = Œ 至 E Merge & Center · \$	reral ▼ % * %		ort & Find	
Clip	board 🖓 Font 🖓	Alignment 🕞	Number 🖓 Styles	Cells	diting	~
A2	▼ : × ✓ f <sub>x</sub> =VLOOKU	(A1,Sheet1!\$A\$1:\$C\$1337,2,0)				~
	А	В	С	D	E	F
1	DP02_0071PE	DP03_0128PE	DP04_0058PE	NAME	state	county
	Percent!!DISABILITY STATUS OF THE CIVILIAN NONINSTITUTIONALIZED POPULATION!!Total	AND PEOPLE WHOSE INCOME IN THE				
	Civilian Noninstitutionalized Population!!With a disability	PAST 12 MONTHS IS BELOW THE POVERTY LEVEL!!All people	AVAILABLE!!Occupied housing units!!No vehicles available			
3	1	3 20.6	5 7.7	Acadia Parish, Louisiana	22	1
4	2	2 15.9	8.2	Allen Parish, Louisiana	22	3
5	11.	5 11.5	3.7	Ascension Parish, Louisiana	22	5
6	19.	5 18.4		Assumption Parish, Louisiana	22	7
7	18.			Avoyelles Parish, Louisiana	22	9
8	2			Beauregard Parish, Louisiana	22	
4	Vulnerability_LA_Parishes Sheet	1   🕀	÷ •			Þ



## Update Year In Your Query To 2015 To Retrieve Results Over Time

- Most variables are consistent from year to year but check for table changes on the ACS website
- API endpoints are in the process of being standardized across years to follow the format of YYYY/acs/DATASET (e.g. 2016/acs/acs5). Users may need to add/delete the /acs across years until the standardization has been completed.

https://api.cens...ty:\*&in=state:22 🗶 Census Data API: /data/2016/acs... X (i) https://api.census.gov/data/2015/ /acs/acs5/profile?get=DP02\_0071PE,DP03\_0128PE,DP04\_0058PE,NAME&for=county:\*&in=state:22 150% ±\*\_\_\_ [["DP02 0071PE", "DP03 0128PE", "DP04 0058PE", "NAME", "state", "county"], ["18.6", "20.6", "8.9", "Acadia Parish, Louisiana", "22", "001"], ["19.5", "16.5", "8.2", "Allen Parish, Louisiana", "22", "003"], ["11.5", "11.8", "4.4", "Ascension Parish, Louisiana", "22", "005"], ["18.4", "16.0", "6.4", "Assumption Parish, Louisiana", "22", "007"], ["18.8", "23.2", "9.7", "Avoyelles Parish, Louisiana", "22", "009"], ["21.1", "20.2", "6.2", "Beauregard Parish, Louisiana", "22", "011"], 5"."11.3"."Bienville Parish. Louisiana"."22"."013"1

https://api.census.gov/data/2015/acs/acs5/profile?get=DP02\_0071PE,DP03\_0128PE,DP04\_0058PE,NAME &for=county:\*&in=state:22



## Outline

- ACS and Census API Basics
- Using the API
- Building an API Request
- API Demo
- Resources for Learning More
- Stay in Touch
- Questions



## **New/Modified/Deleted Tables**

#### American Community Survey (ACS) About the Survey 2016 ACS 1-year Estimates Respond to the Survey () (f) News & Updates Data New Tables Guidance for Data Modified Tables Users Geography & ACS Modified Tables Technical Documentation Computer and Internet Code Lists, Definitions, and Accuracy Detailed Table B28001 was modified to match changes in types of computers in the 2016 User Notes questionnaire, such as the addition of a category for tablets. Errata Detailed Table B28002 was modified to match changes in types of Internet subscriptions in the 2016 Data Suppression guestionnaire. For example, individual categories for cable, fiber optic and DSL were deleted. A single category - "Broadband such as cable, fiber optic, or DSL" - was added. Table & Geography Changes Language

census.gov/programs-surveys/acs/technical-documentation/table-and-geography-changes.html



## **Visualizing Table/Variable Changes**

## B28002\_004E

2016

7	Λ	1	Г
Ζ	U	Τ	J

	United States
	Estimate
Total:	118,860,065
With an Internet subscription	97,307,412
Dial-up with no other type of Internet subscription	510,666
Broadband of any type	96,796,746
Cellular data plan	81,066,266
Cellular data plan with no other type of Internet subscription	12,405,627
	00.047.074

	United States
	Estimate
Total:	118,208,250
With an Internet subscription:	91,313,308
Dial-up alone	667,676
DSL:	14,786,484
With mobile broadband	5,959,037
Without mobile broadband	8,827,447
Cable medana	40 444 457



## **Benefits of API Compared to American FactFinder or Summary File**

- Get the exact variables and geographies you need
- Quickly update queries to get data across years: Most variables are consistent from year to year
- Easily merge results: List of geographies is consistent within a particular ACS dataset in the API

( https://api.census.gov/data/2016/acs/acs1?get=B07012_014E,NAME&for=county:*∈=state:22
[["B07012_014E","NAME","state","county"],
[null, "Ascension Parish, Louisiana", "22", "005"],
["1419","Bossier Parish, Louisiana","22","015"],
["1299","Caddo Parish, Louisiana","22","017"],
["722" "Colcocion Dorich Louisions" "22" "010"]

#### Example: Table B07012 "All Parishes in Louisiana"



	Louisiana		
Estimate	Margin of Error	Estimate	Μ
119,649	+/-1,304	240,453	
3,786	+/-1,551	3,440	
1,419	+/-1,276	1,299	
	Loui Estimate 119,649 3,786	Estimate         Margin of Error           119,649         +/-1,304           3,786         +/-1,551	Louisiana         Loui           Margin of Estimate         Margin of Error         Estimate           119,649         +/-1,304         240,453           3,786         +/-1,551         3,440

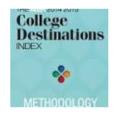
## Outline

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## Source Us!

U.S. Census Bureau's [YYYY-YYY] American Community Survey [1/3/5]-year [estimates/statistics/data release]



College Destinations: How We Rank Them American Institute for Economic Research - Apr 7, 2014 Sources: U.S. Census Bureau; American Community Survey, 2011 American Community Survey 1-Year Estimates, Table B01003; using ...



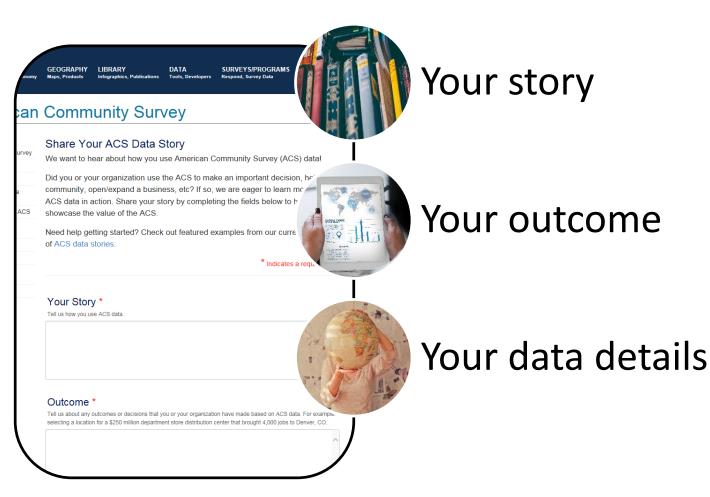
NMSU Valencia County Extension providing youth develo... New Mexico State University NewsCenter - Apr 14, 2015 ... Mexico and \$53,046 for the United States, according to the U.S. Census Bureau's 2009-2013 American Community Survey 5-Year Estimate.



Census Estimates Show Progress Toward ACA Coverag... Health Affairs (blog) - Sep 28, 2015 Source: U.S. Census Bureau, 2013 and 2014 American Community Survey 1-year estimates from Table S2701 in American Fact Finder.



## **Data Tells Stories. Tell Us Yours!**



census.gov/acs/www/share-your-story/index.php



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

## **Continue the Conversation #ACSdata**



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





1-800-923-8282 (Census) 1-866-437-0171 (API)



acso.users.support@census.gov (ACS) cnmp.developers.list@census.gov (API)



Social media: @uscensusbureau



Gitter API Forum: https://gitter.im/uscensusbureau/ general



Slack API Forum: https://uscensusbureau.slack.com



## **Questions?**



## **Upcoming/Recent Webinars**

## **Upcoming Webinars:**

- June 27: Using the Census Bureau 2017 Planning Database
- August 1: Geographic Areas and Concepts for the ACS

census.gov/programs-surveys/acs/news/events.html

#### **Recent Webinars:**

- How to Use Geodatabase Files and ArcMap
- Using ACS Estimates and Margins of Error
- Using the Census Bureau's ACS for Assessment Officials
- Intro to the ACS Public Use Microdata Sample (PUMS) Files

census.gov/programs-surveys/acs/guidance/training-presentations.html





- 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
- Webinars and special sessions at professional meetings planned
- Users group website and online community
- API Group at:

https://acsdatacommunity.prb.org/acs-data-products--resources/api/f/15/t/158

## acsdatacommunity.prb.org



## **Need Local Stats?**

- 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 (1-844-275-3282) census.askdata@census.gov



