Using ACS Data to Create Data Visualizations

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U.S. Census Bureau

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United States Census Bureau

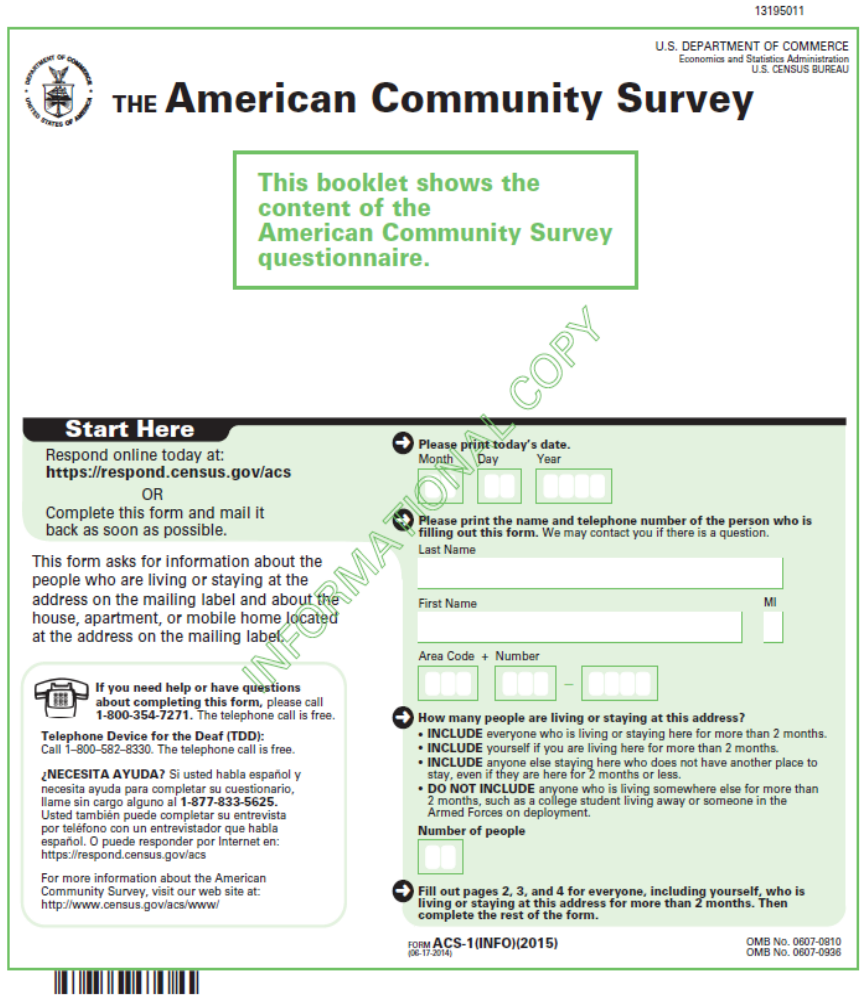
U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU
census.gov

This presentation is released to inform interested parties of ongoing research and to encourage discussion of work in progress. The views expressed are those of the author and not necessarily those of the U.S. Census Bureau.

The American Community Survey

The American Community Survey is on the leading edge of survey design, continuous improvement, and data quality

- 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 **3.5 million** addresses and informs over **$675 billion** of Federal government spending each year
- Covers **40+ topics**, supports over **300** evidence-based Federal government uses, and produces **11 billion** estimates each year
- Three key annual data releases:
  - 1-year Estimates (for large populations)
  - 1-year Supplemental Estimates (for small populations)
  - 5-year Estimates (for very small populations)



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U.S. DEPARTMENT OF COMMERCE
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THE American Community Survey

This booklet shows the content of the American Community Survey questionnaire.

INFORMATIONAL COPY

Start Here

Respond online today at:
https://respond.census.gov/acs
OR
Complete this form and mail it back as soon as possible.

This form asks for information about the people who are living or staying at the address on the mailing label and about the house, apartment, or mobile home located at the address on the mailing label.

If you need help or have questions about completing this form, please call 1-800-354-7271. The telephone call is free.

Telephone Device for the Deaf (TDD):
Call 1–800–582–8330. The telephone call is free.

¿NECESITA AYUDA? Si usted habla español y necesita ayuda para completar su cuestionario, llame sin cargo alguno al 1-877-833-5625. Usted también puede completar su entrevista por teléfono con un entrevistador que habla español. O puede responder por Internet en: https://respond.census.gov/acs

For more information about the American Community Survey, visit our web site at: http://www.census.gov/acs/www/

Please print today's date.
Month Day Year

Please print the name and telephone number of the person who is filling out this form. We may contact you if there is a question.
Last Name
First Name MI
Area Code + Number

How many people are living or staying at this address?
- INCLUDE everyone who is living or staying here for more than 2 months.
- INCLUDE yourself if you are living here for more than 2 months.
- INCLUDE anyone else staying here who does not have another place to stay, even if they are here for 2 months or less.
- DO NOT INCLUDE anyone who is living somewhere else for more than 2 months, such as a college student living away or someone in the Armed Forces on deployment.

Number of people

Fill out pages 2, 3, and 4 for everyone, including yourself, who is living or staying at this address for more than 2 months. Then complete the rest of the form.

FORM ACS-1(INFO)(2015) (06-17-2014)
OMB No. 0607-0810
OMB No. 0607-0936

United States Census Bureau

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Types of Data Products

Summary Products

- Tables and profiles
- Generated by Census Bureau with input from subject matter experts
- Available from:
  - data.census.gov
  - American FactFinder
  - Many other tools and apps

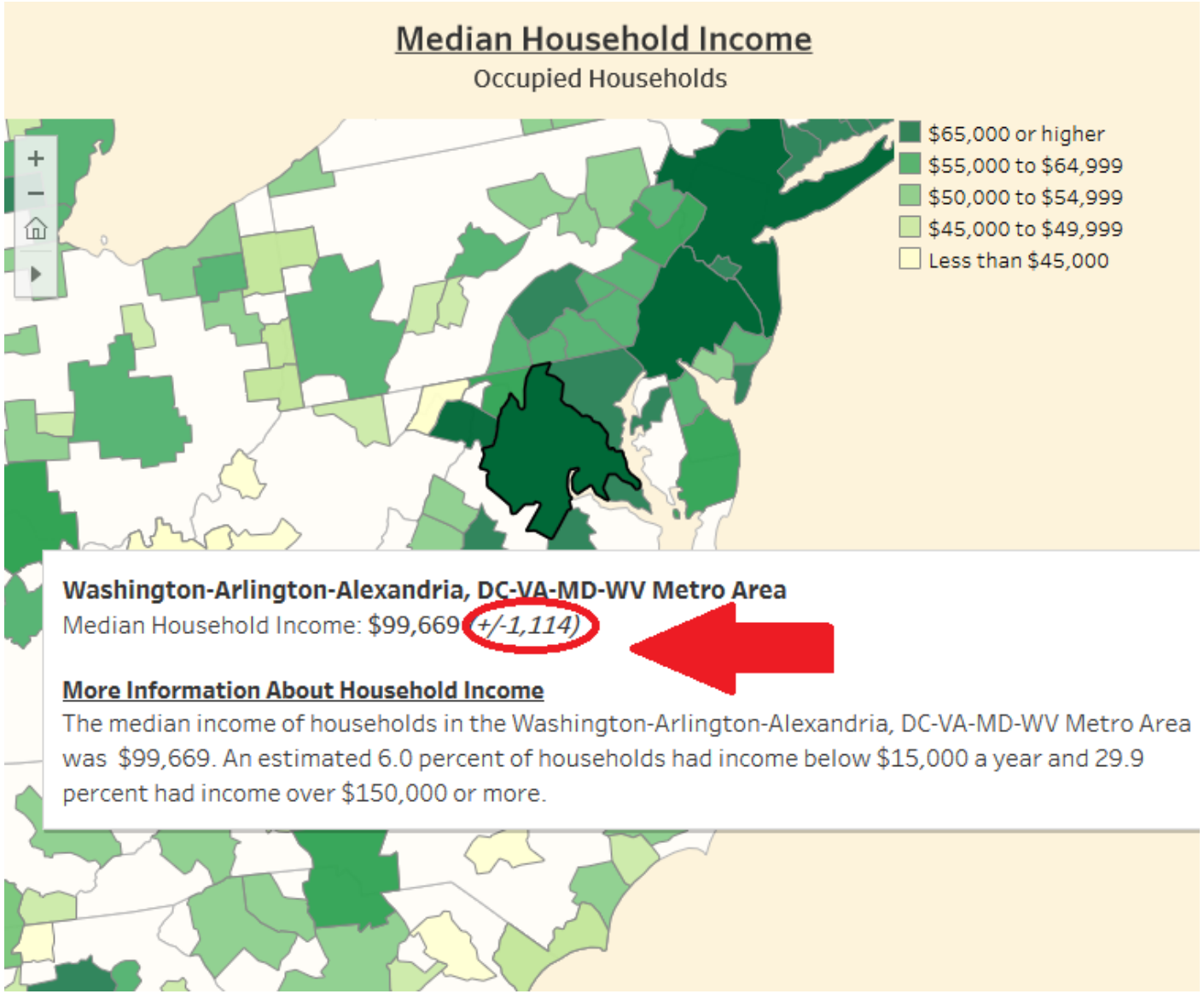
Public Use Microdata Sample

- Untabulated records
- Subsample of population and housing records from the ACS
- Available from:
  - FTP

Best Practices to Remember

- Remember Margins of Error
  - Show them
  - Visualize them
  - Ensure reliability

- Use Census tracts and block groups with caution
  - Margins of Error
  - Custom Geographies



census.gov/library/visualizations/interactive/learn-acs.html

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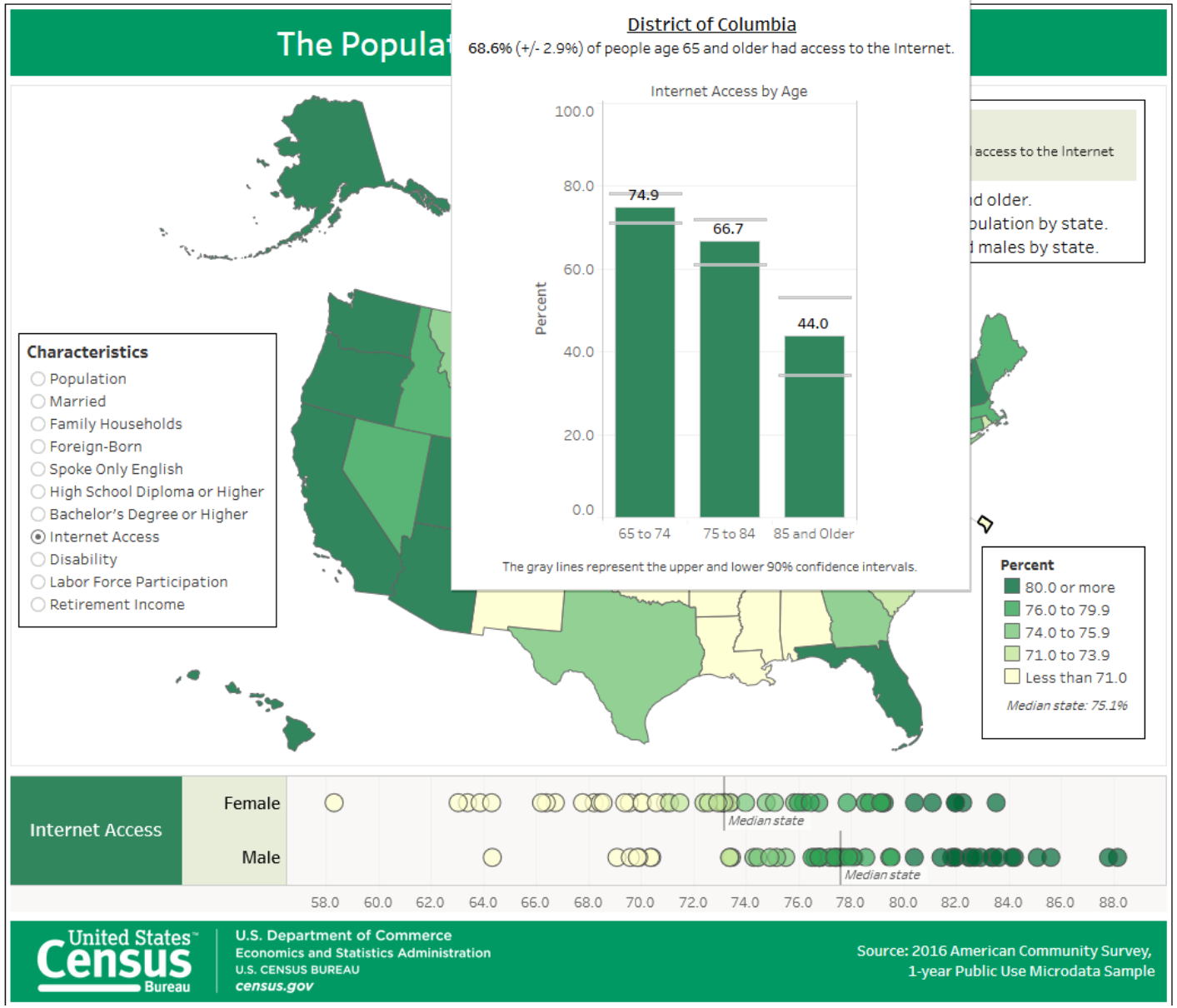

census.gov/library/visualizations/interactive/population-65-years.html

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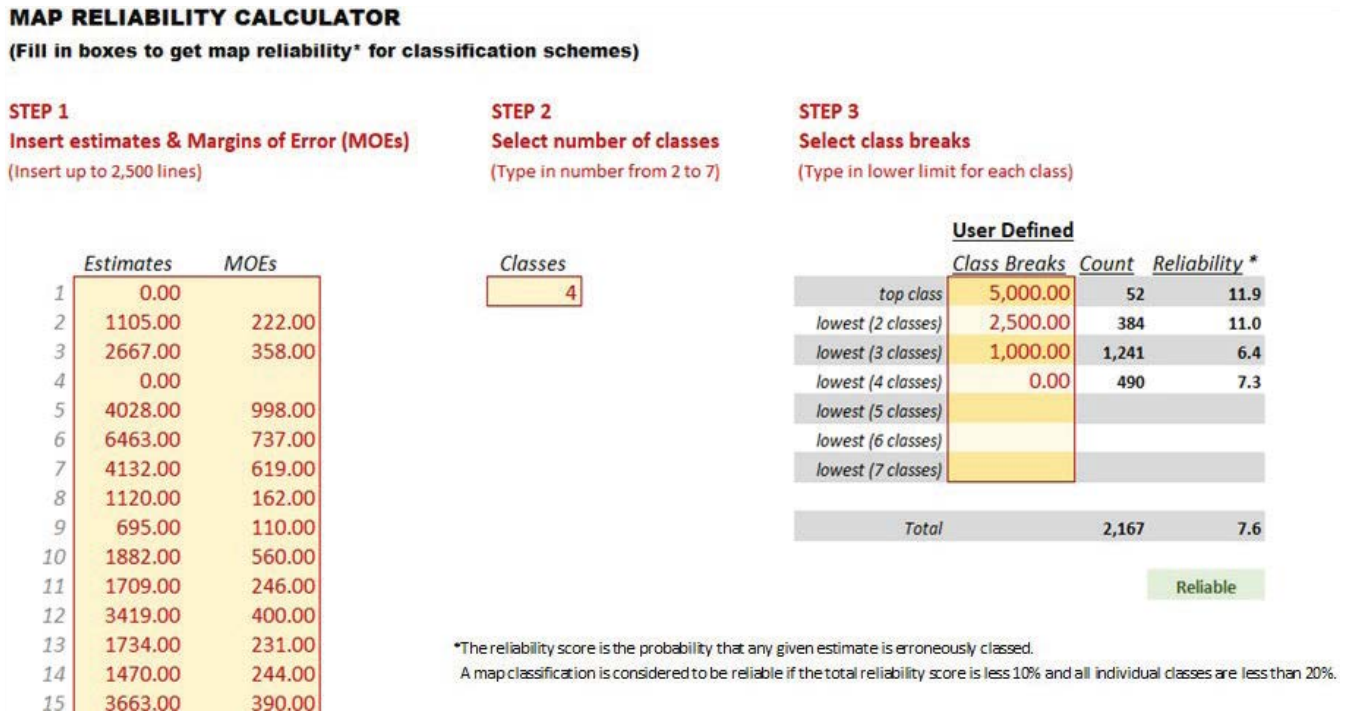

MAP RELIABILITY CALCULATOR

(Fill in boxes to get map reliability* for classification schemes)

STEP 1
Insert estimates & Margins of Error (MOEs)
(Insert up to 2,500 lines)

	Estimates	MOEs
1	0.00	
2	1105.00	222.00
3	2667.00	358.00
4	0.00	
5	4028.00	998.00
6	6463.00	737.00
7	4132.00	619.00
8	1120.00	162.00
9	695.00	110.00
10	1882.00	560.00
11	1709.00	246.00
12	3419.00	400.00
13	1734.00	231.00
14	1470.00	244.00
15	3663.00	390.00

STEP 2
Select number of classes
(Type in number from 2 to 7)

Classes
4

STEP 3
Select class breaks
(Type in lower limit for each class)

User Defined

	Class Breaks	Count	Reliability *
top class	5,000.00	52	11.9
lowest (2 classes)	2,500.00	384	11.0
lowest (3 classes)	1,000.00	1,241	6.4
lowest (4 classes)	0.00	490	7.3
lowest (5 classes)			
lowest (6 classes)			
lowest (7 classes)			
Total		2,167	7.6

Reliable

*The reliability score is the probability that any given estimate is erroneously classed.
A map classification is considered to be reliable if the total reliability score is less 10% and all individual classes are less than 20%.

census.gov/programs-surveys/acs/guidance/handbooks/state-local.html

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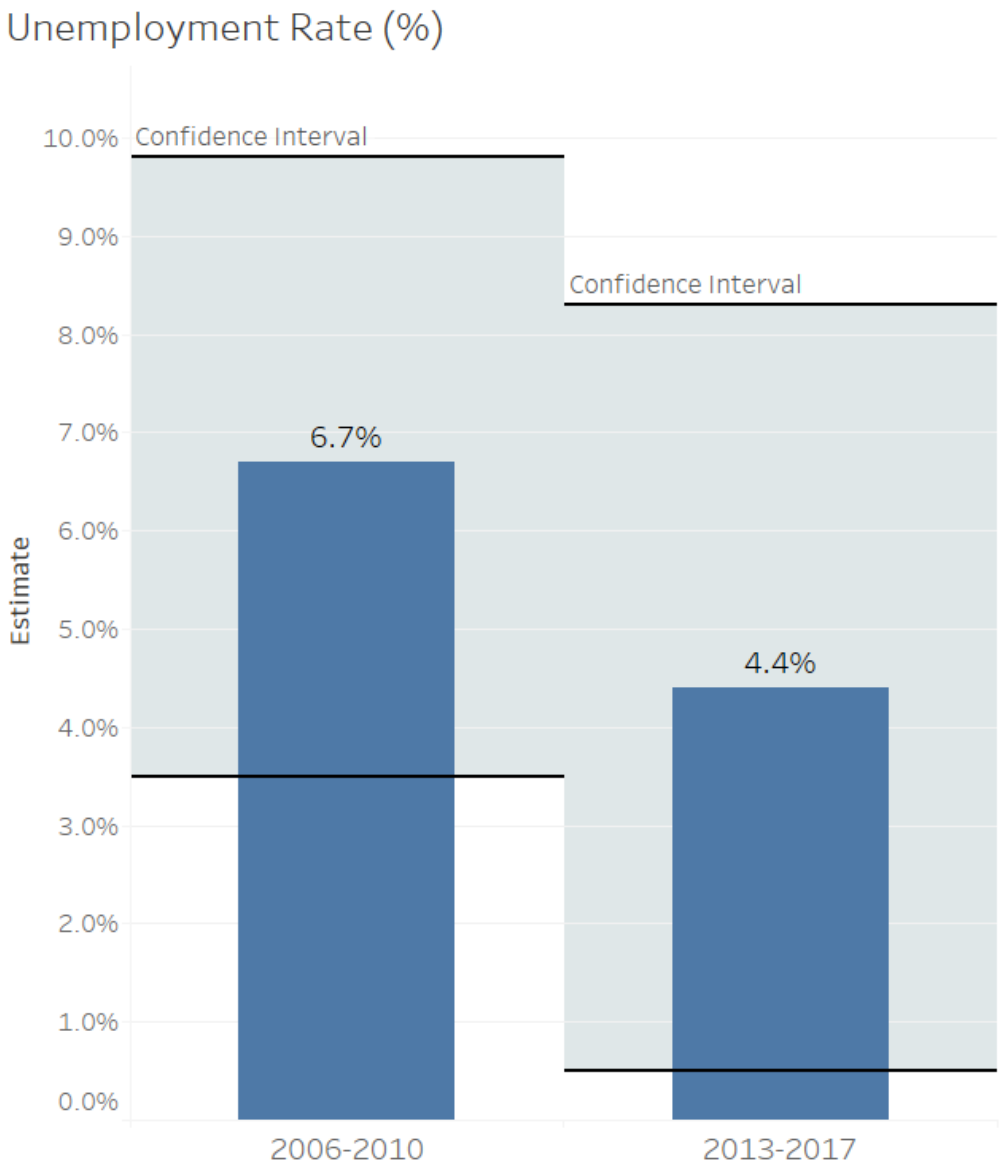

Source U.S. Census Bureau's 2006-2010 and 2013-2017 5-Year Estimates for Census Tract 32007.07 Maricopa County, Arizona

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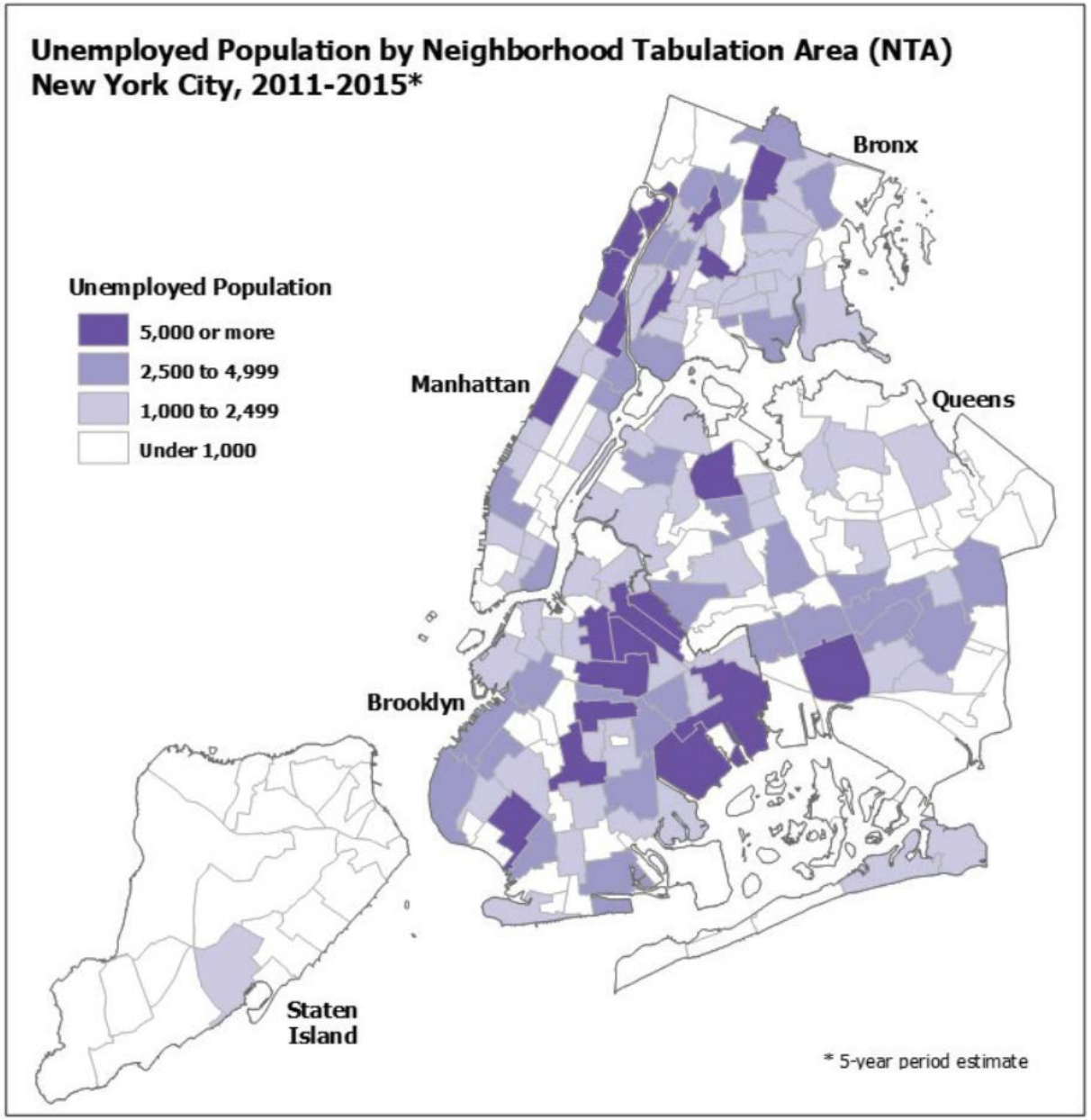

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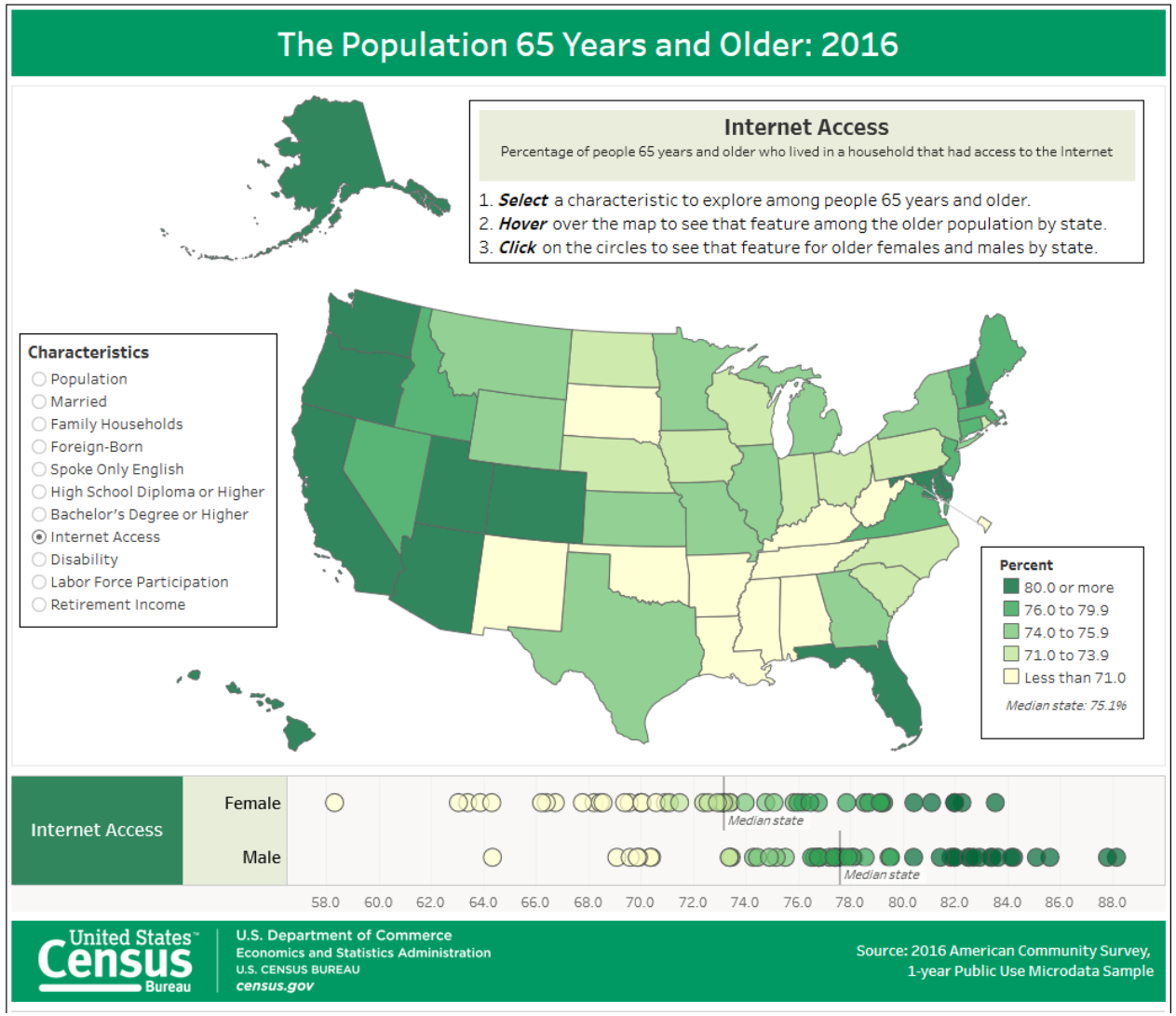
Questions Not Answered by Summary Products

- What Percentage of Older Americans Have Internet Access at Home?

- What is the Marital Status of Young Adults in College?

Questions Answered by ACS Public Use Microdata Sample

- What Percentage of Older Americans Have Internet Access at Home?

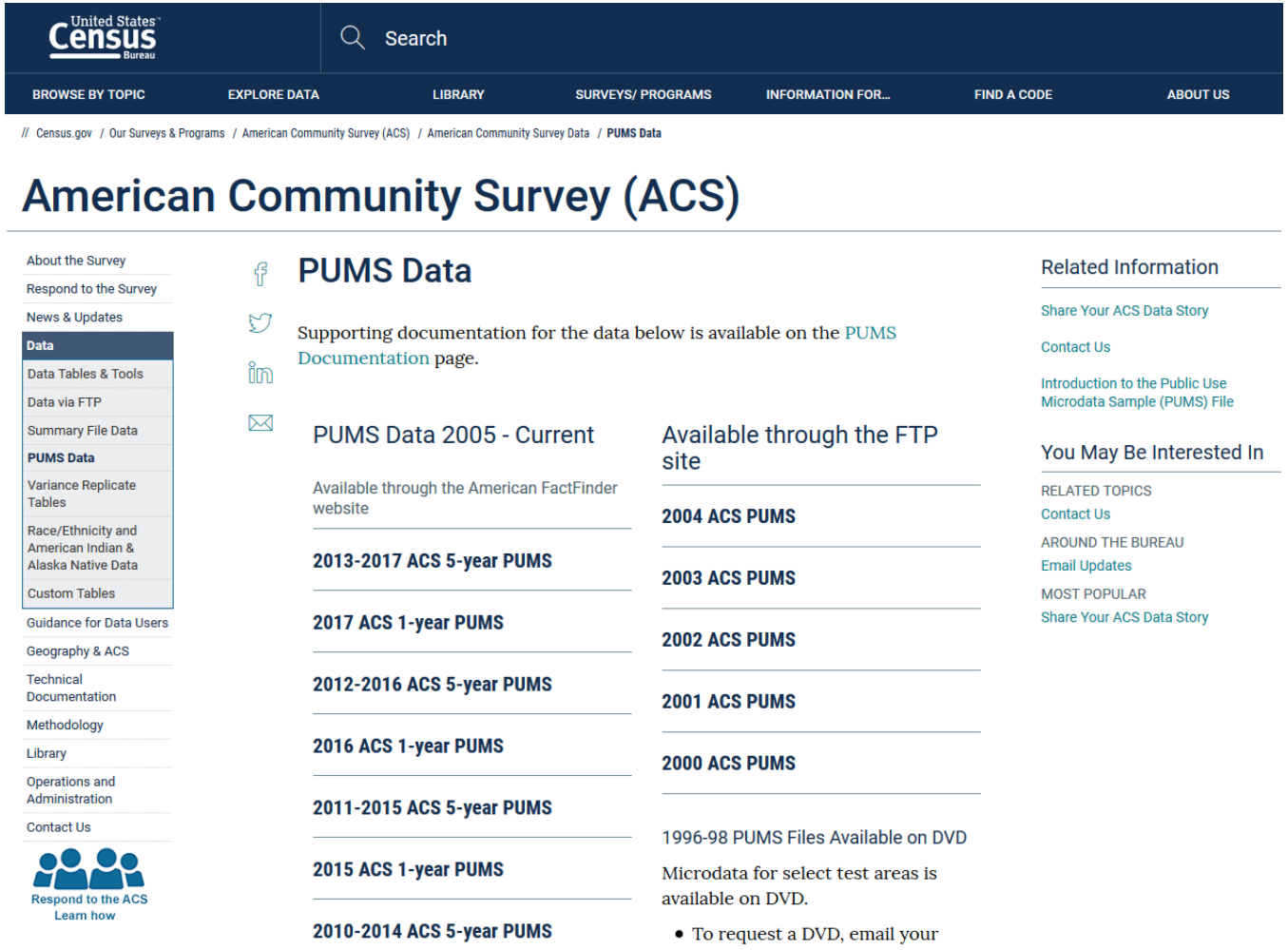


- What is the Marital Status of Young Adults in College?
  - Upcoming demonstration

census.gov/library/visualizations/interactive/population-65-years.html

Accessing the ACS Public Use Microdata Sample

- Go to the ACS website
- Select the desired PUMS file
- Select format (CSV or SAS)
- Select geography and type
  - (Housing or Population)
- Unzip the files
  - (National will have two files)



census.gov/programs-surveys/acs/data/pums.html

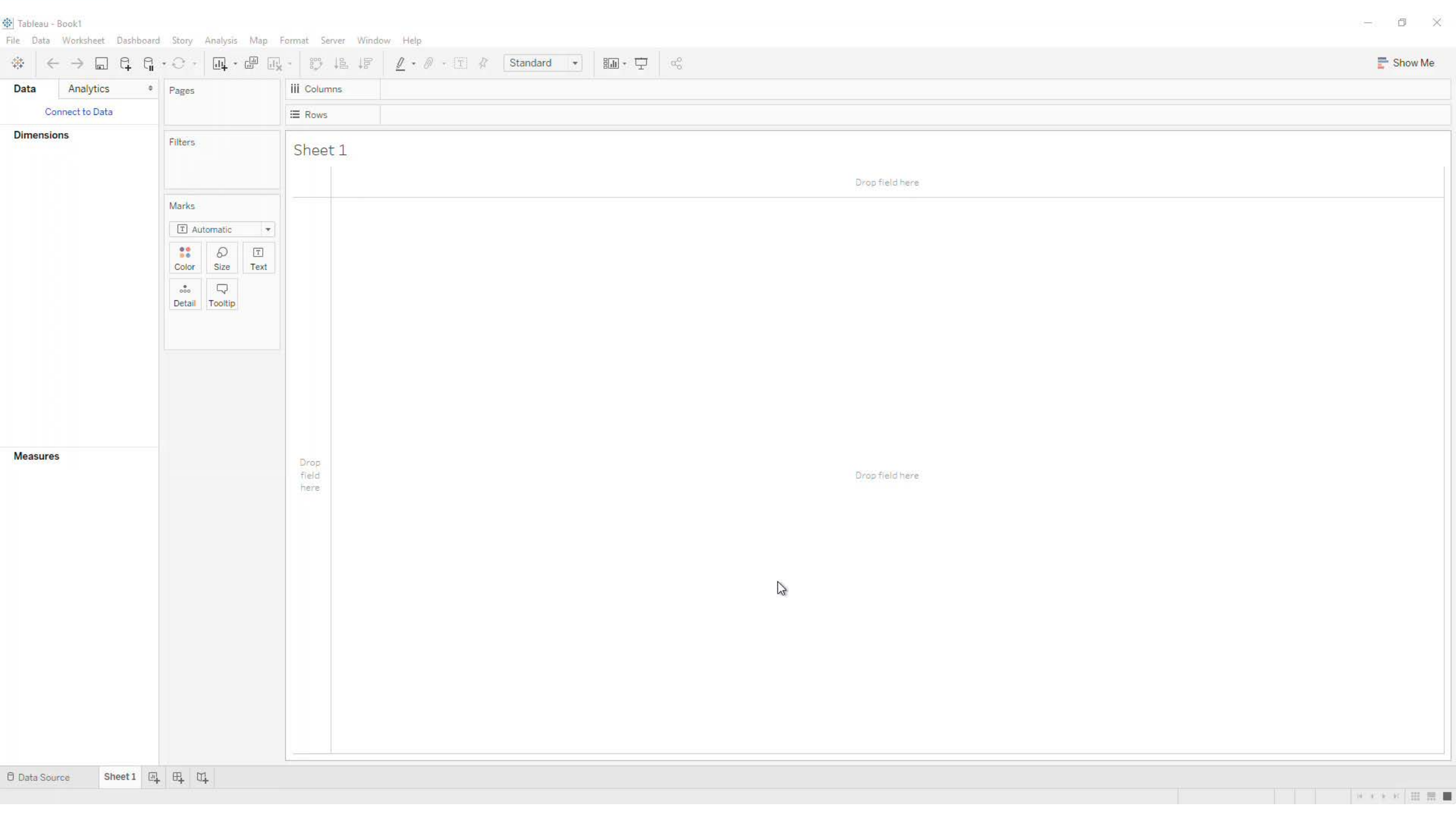
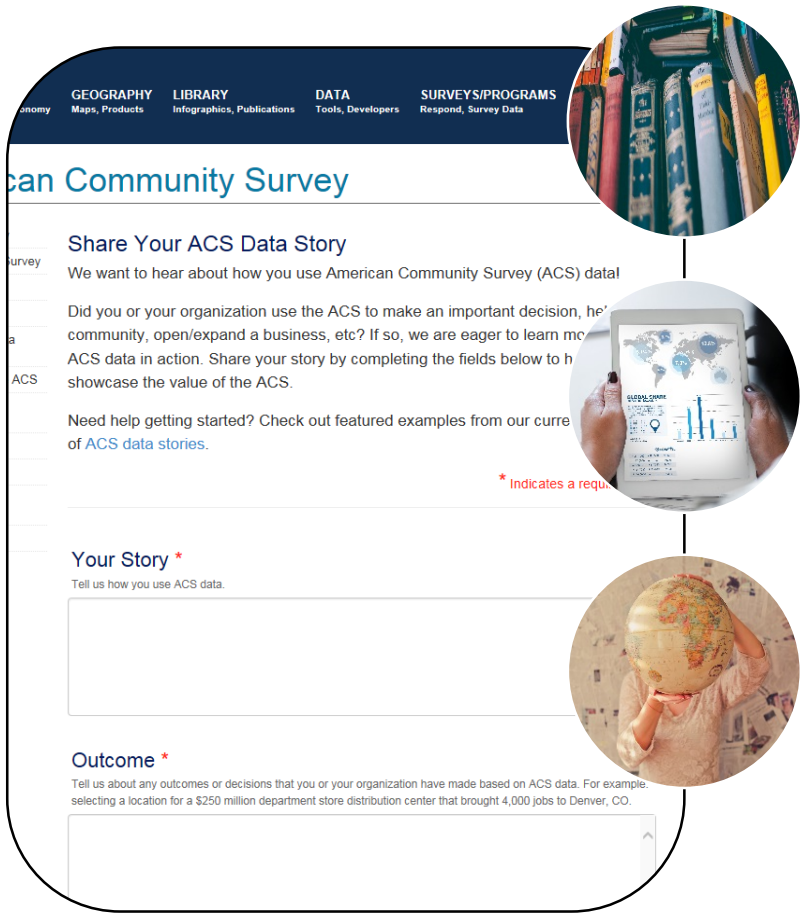


Tableau - Book1
File Data Worksheet Dashboard Story Analysis Map Format Server Window Help
Standard
Show Me
Data
Analytics
Connect to Data
Dimensions
Measures
Pages
Filters
Marks
Automatic
Color
Size
Text
Detail
Tooltip
Columns
Rows
Sheet 1
Drop field here
Drop field here
Drop field here
Data Source
Sheet 1

The American Community Survey

Data Tell Stories. Tell us Yours!



Your story

Your outcome

Your data details

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

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The American Community Survey

Continue the Conversation

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

More information online: https://www.census.gov/acs

Census Customer Service Center
800-923-8282

Social media: @uscensusbureau
#ACSdata

acso.users.support@census.gov

Source Us:

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

Links to ACS Visualizations

AMERICAN COMMUNITY SURVEY

- census.gov/acs/

2017 AMERICAN COMMUNITY SURVEY (ACS) DATA WHEEL

- census.gov/library/visualizations/interactive/2017-data-wheel.html

WHAT CAN YOU LEARN ABOUT COUNTIES FROM THE AMERICAN COMMUNITY SURVEY?

- census.gov/library/visualizations/interactive/learn-acs.html

WHAT CAN YOU LEARN ABOUT COUNTIES FROM THE AMERICAN COMMUNITY SURVEY?

- census.gov/library/visualizations/interactive/acs-counties.html

HOUSING ADMINISTATIVE RECORD SIMULATION

- census.gov/library/visualizations/interactive/housing-admin-record-simulation.html

WHAT PEOPLE AND HOUSEHOLDS ARE REPRESENTED IN EACH ACS DATA COLLECTION MODE?

- census.gov/library/visualizations/interactive/acs-collection.html

PRESENTATION: ENGAGING INTERNAL AND EXTERNAL AUDIENCES WITH THE ACS THROUGH DATA VISUALIZATION

- census.gov/content/dam/Census/newsroom/press-kits/2018/aapor/aapor-presentation-interactive-acs.pdf