Visualizing ACS data with R

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May 18, 2022
About me

- Associate Professor of Geography at TCU; spatial data science / R consultant

- Book: *Analyzing US Census Data: Methods, Maps, and Models in R*; pre-order for fall release

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Typically, to visualize ACS data:

- Find the data tables you need on data.census.gov or other resources;
- Clean and format demographic data tables in Excel or other spreadsheet software;
- If you want a map, get matching shapefiles from the Census TIGER/Line databases;
- Load shapefiles and demographic data in a desktop GIS then join the datasets;
- Finally, design visualization products with dashboarding / viz software, GIS software, JavaScript, …
R and tidycensus

- R: the "ultimate user interface" - not just for statistics!
- **tidycensus**: an R *package* that streamlines the acquisition and data prep process for ACS data (and other sources)!
The tidycensus R package

- Original motivation: streamline the process of getting decennial Census / ACS data with geometry (GIS data) pre-joined

- Core functions: `get_decennial()` and `get_acs()`

- The project has since evolved to accommodate ACS microdata, Census population estimates, and migration flows data as well
get_acs() : your portal to ACS data

- **geography**: The level of aggregation you need
- **variables**: One or more ACS variable codes
- **state**: The state subset; also can use county for small geographies
- **year**: The end-year of the 5-year ACS dataset, or the year of the 1-year ACS
- **geometry**: If TRUE, return Census shapes pre-joined!
Demo: visualizing ACS data with R

Code available at https://bit.ly/prb-demo or scan the QR code:
Thank you!