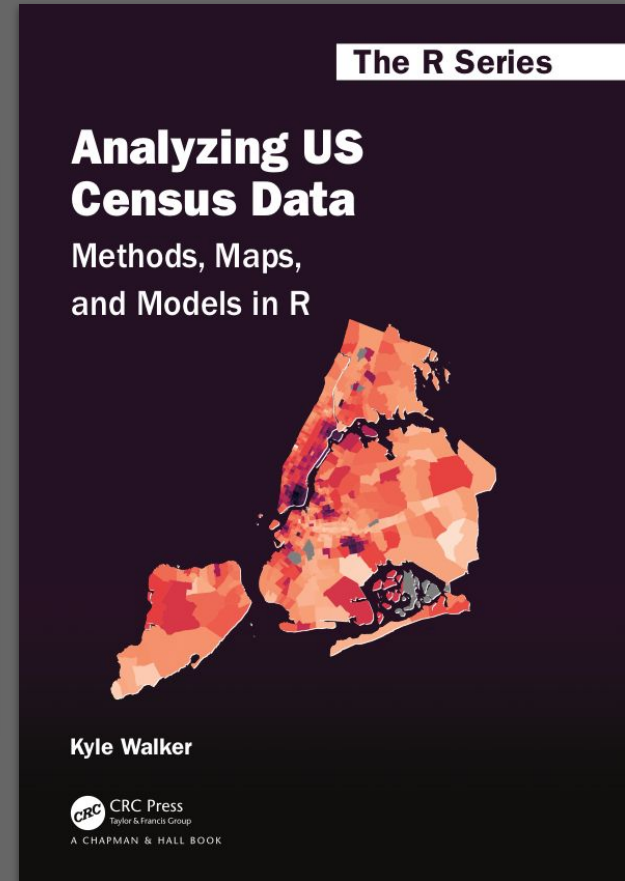


Visualizing ACS data with R

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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
- Twitter: [@kyle_e_walker](#)

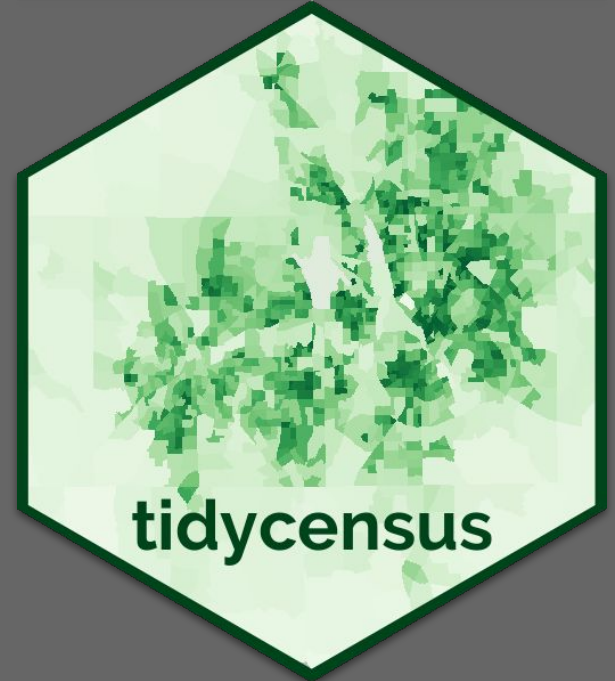


Typically, to visualize ACS data:

- 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, ...

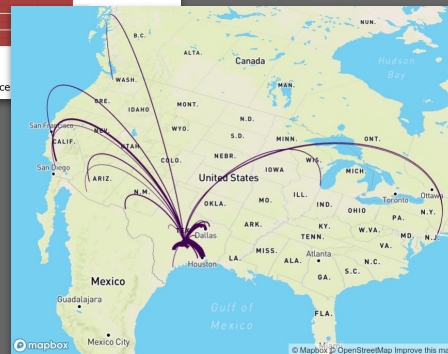
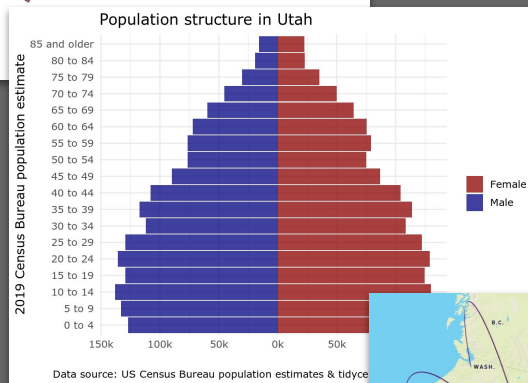
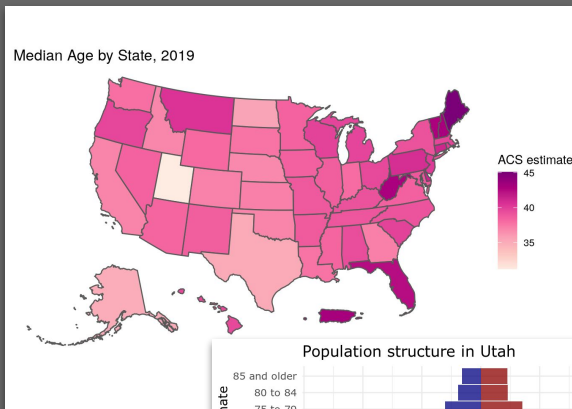
R and tidycensus

- 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!

```
library(tidycensus)

az_age <- get_acs(
  geography = "county",
  variables = "B01002_001",
  state = "AZ",
  year = 2020,
  geometry = TRUE
)
```

Demo: visualizing ACS data with R

Code available at <https://bit.ly/prb-demo> or scan the QR code:



Thank you!