Visualization of BLS Geospatial Data using R/Shiny

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CAN WE DEVELOP A DYNAMIC MAPPING TOOL FOR OES DATA USING R?

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Can we do this in R - Why R?

- R is an open source software.
  - Free
  - Versatile
  - Functional
  - Trendy
- FREE!

- And, Yes, it can make maps.

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What is OES?

- OES provides employment and wage estimates for
  - Over 800 occupations
  - Over 300 industries
  - More than 375 Metropolitan areas
  - 34 metropolitan divisions
  - All 50 states, the District of Columbia, Puerto Rico, Guam, and the Virgin Islands
  - Non-metropolitan areas.
- Published annually.

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OES maps

- OES Maps

Making a Dynamic Tool: Using Shiny

- Shiny is a package within R for interactive applications
  - Works with other packages in R for maps, graphs, tables, etc.
  - Deployed via a server
    - Deployment options include a local server or cloud based server
    - Users do not require R, the packages, or data to use the application

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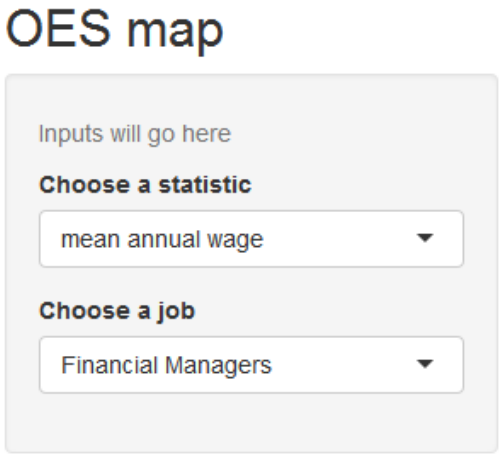
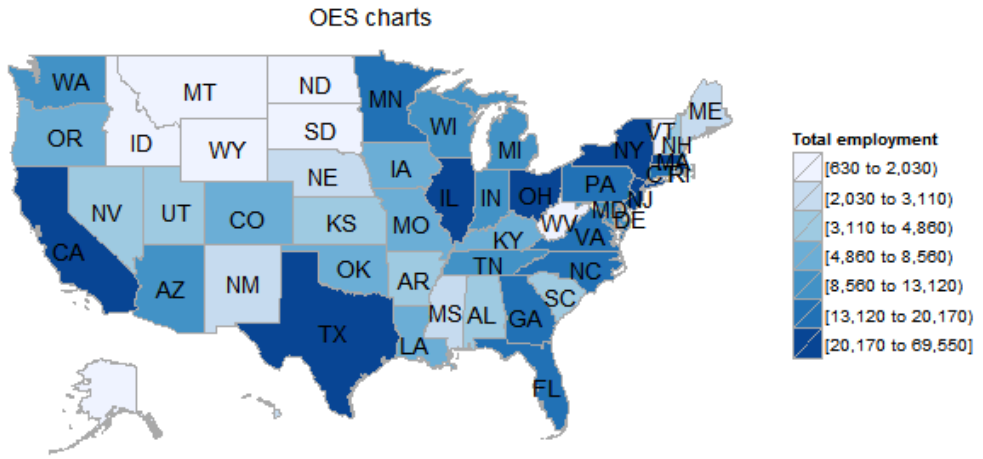
Mapping in R

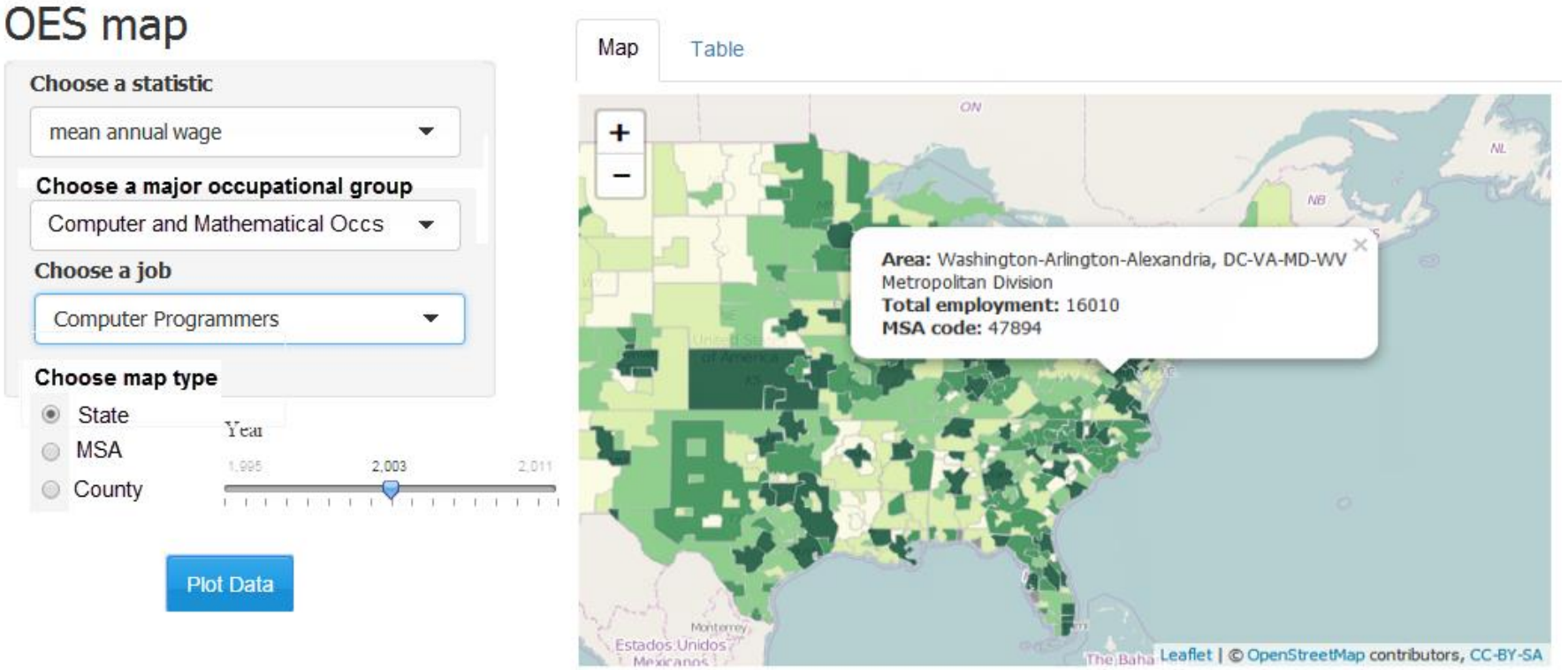
- ChoroplethR package
  - Pros: very useful to make a quick state map
  - Cons: limited interactivity and difficult to incorporate shape files to map MSAs





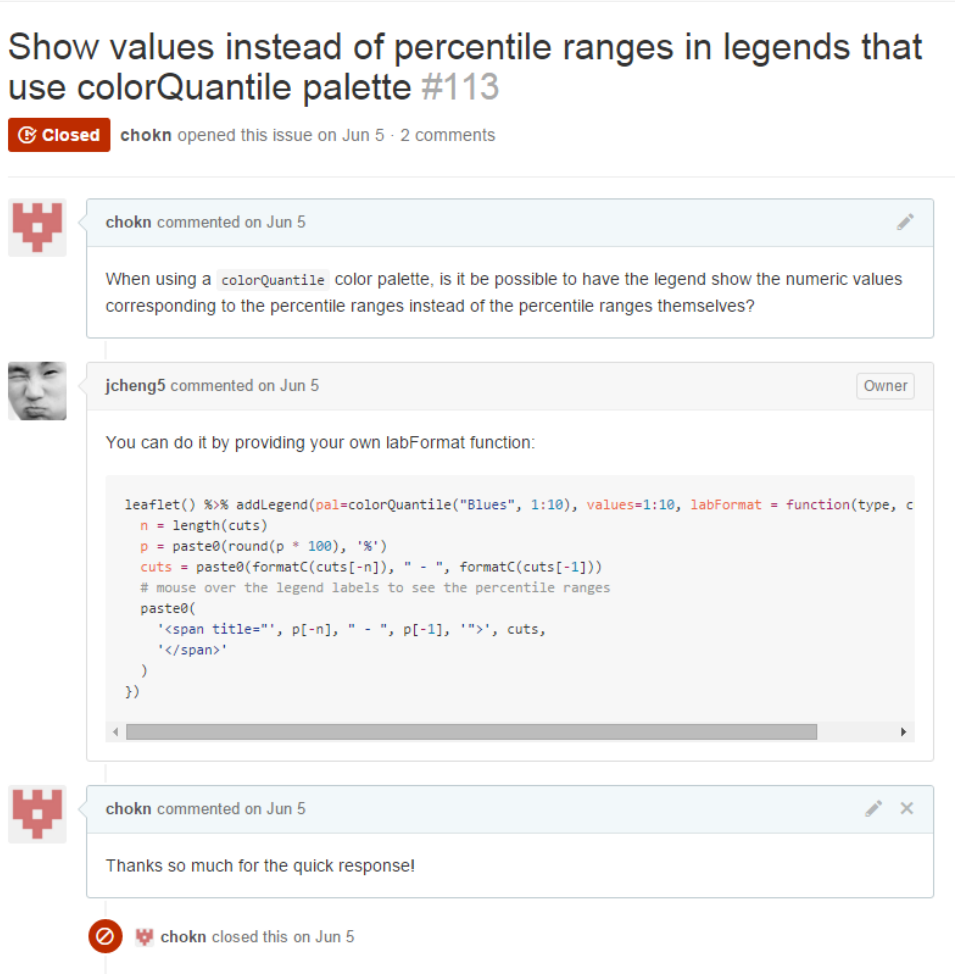
Early trials with Leaflet

- Pros: Increased interactivity with maps, Easy compatibility with shape files
- Cons: Difficult to change projection



Can we add a legend?

- No.
  - Leaflet had a legend tool, but not dynamic.
  - Joe Cheng, Leaflet developer, showed us how. Special Thanks!



Show values instead of percentile ranges in legends that use colorQuantile palette #113

Closed **chokn** opened this issue on Jun 5 · 2 comments

chokn commented on Jun 5

When using a `colorQuantile` color palette, is it be possible to have the legend show the numeric values corresponding to the percentile ranges instead of the percentile ranges themselves?

jcheng5 commented on Jun 5 — Owner

You can do it by providing your own labFormat function:

```
leaflet() %>% addLegend(pal=colorQuantile("Blues", 1:10), values=1:10, labFormat = function(type, c
  n = length(cuts)
  p = paste0(round(p * 100), '%')
  cuts = paste0(formatC(cuts[-n]), " - ", formatC(cuts[-1]))
  # mouse over the legend labels to see the percentile ranges
  paste0(
    '<span title="', p[-n], " - ", p[-1], '">', cuts,
    '</span>'
  )
})
```

chokn commented on Jun 5

Thanks so much for the quick response!

chokn closed this on Jun 5

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Thanks to Everyone!

- Other features added with input from
  - Jean Fox
  - David Hiles
  - Ben Cover
  - Michael Schwarz
- Resources
  - Shiny Tutorial at http://shiny.rstudio.com/
  - SuperZip Example by Rstudio
  - GitHub
  - StackOverflow

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CAN WE DEPLOY OUR DYNAMIC MAPPING TOOL FOR OES DATA?

Demonstration

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