Week 5 Exercises

Data Hack 2022

4/28/2022

More of PDF Extracting and Spatial Data

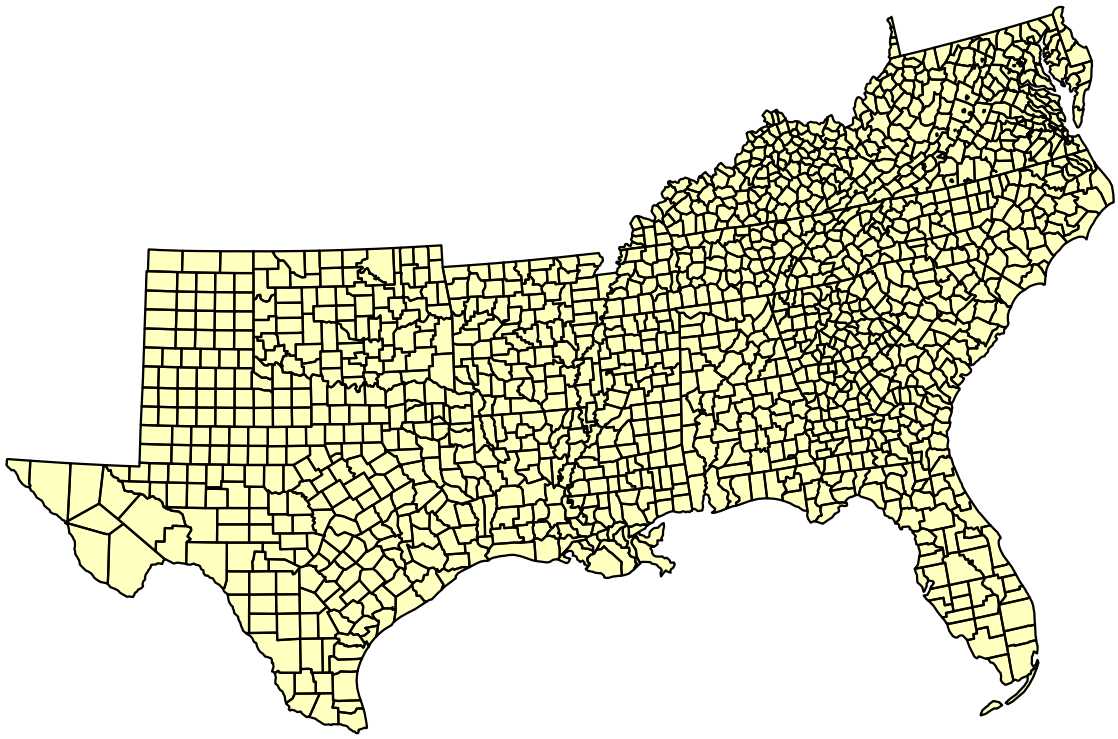
In this week, we are going to wrap up the use of `pdftools` and start with spatial data. You'll need to load the following packages (install them if necessary):

`usmap` `sf` `mapview`

Some exercises to practice:

1. Consider the next map:

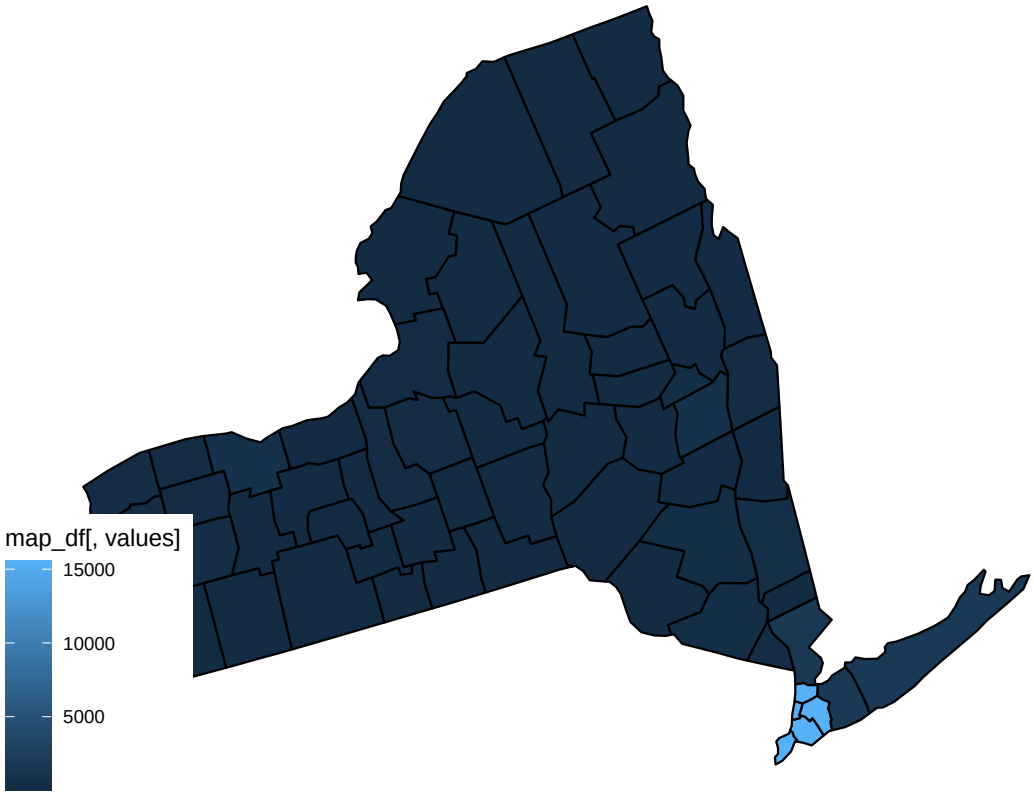
```
plot_usmap("counties", fill = "yellow", alpha = 0.25,
           include = c(.south_region))
```



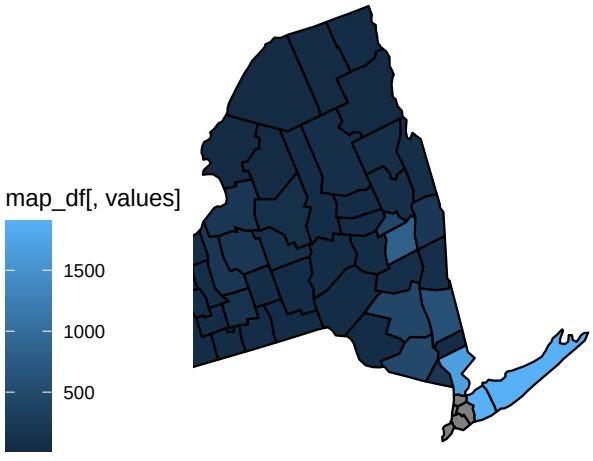
Plot a similar map, where counties are in lightblue and exclude Florida.

2. Use the file `ny_hmfm.csv` and consider the following graph:

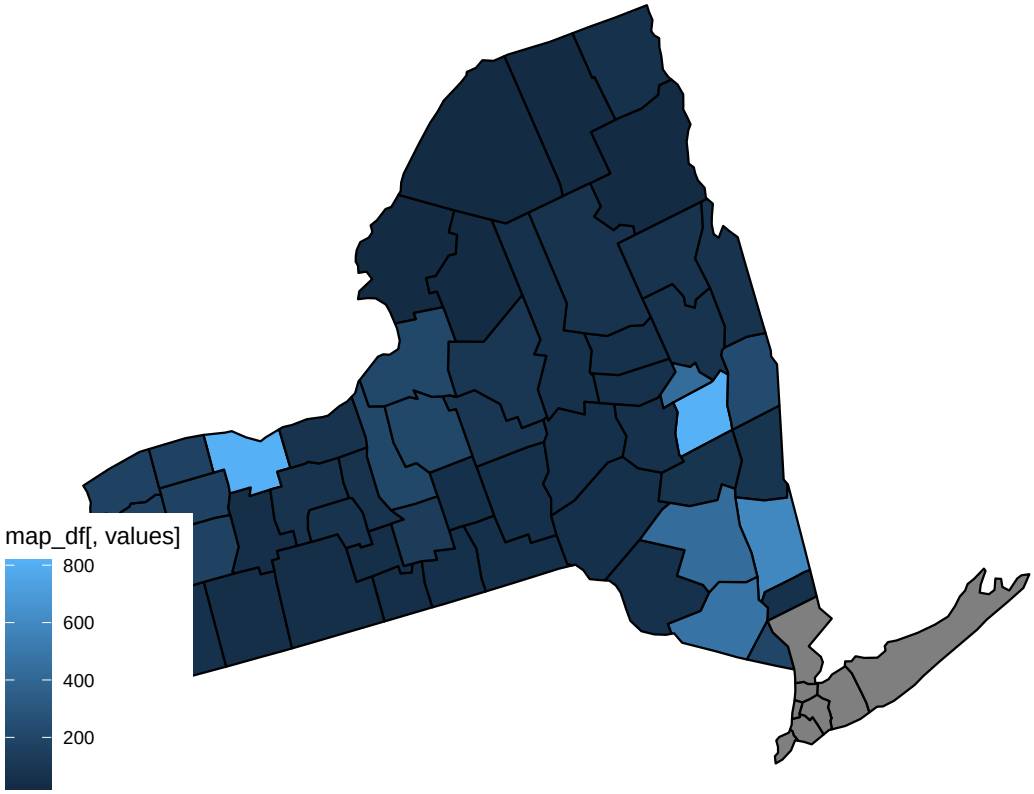
```
usmap::plot_usmap(data=ny_hm,include="NY", values = "overall_homeless")
```



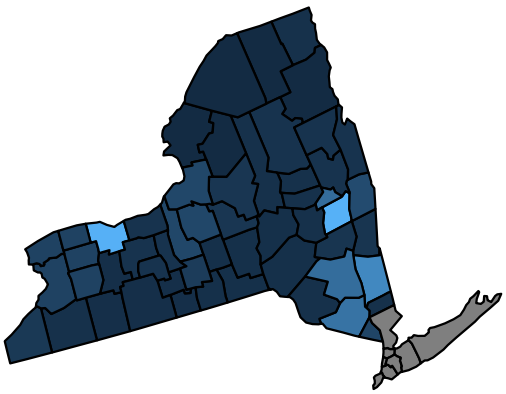
Exclude the values of overall_homeless for New York City (counties: Bronx, Kings, New York, Queens and Richmond) You should get a map that looks like this:



Now get rid off the counties: Nassau, Suffolk and Westchester. You should get this map:



Finally, google how to get rid off the legend on the bottom left that says: "map_df[,values]" (If you prefer, try to locate the legend at the top right of the graph)



A little bit of work with sf:

3. Explore the `sf dataframe` called `new_york_state` (or `ny_no_geometry`to open it faster). Consider any 2 Coc localities and plot their areas.

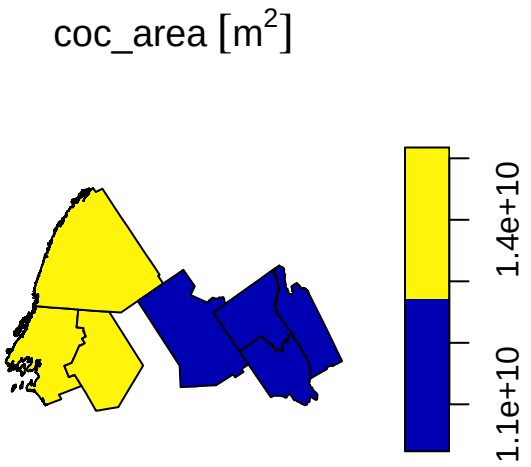


Figure 1: Example using NY-522 and NY-523 CoC

4. Do the previous graph but with a new variable that represents federal money per homeless person.