Lab 1 - Intro to RMarkdown and Github

GIS III Spring 2020 - Erin Abbott

Contents

Submission by Sunday 4/12

Develop a new RMarkdown document:

- R version installed:

```
version
```

```
##                _
## platform       x86_64-pc-linux-gnu
## arch           x86_64
## os             linux-gnu
## system         x86_64, linux-gnu
## status
## major          3
## minor          6.0
## year           2019
## month          04
## day            26
## svn rev        76424
## language       R
## version.string R version 3.6.0 (2019-04-26)
## nickname       Planting of a Tree
```

- load libraries

```
#installing necessary libraries
library(sf)
library(raster)
library(rgdal)
library(spData)
library(RColorBrewer)
#devtools::install_github("Nowosad/spDataLarge") --> this library could not be installed.
```

- Includes 2-3 code examples of R that you've learned as code chunks. This can be from introductory learning materials, and/or from the chapter readings this week.

Example 1:

```
# example 1: summary statistics for GDP per capita for the 177 countries in the data set
 library(spData)  # the file wouldn't knit because it couldn't find "world", but by loading the necessa
```

```
## To access larger datasets in this package, install the spDataLarge
## package with: `install.packages('spDataLarge',
## repos='https://nowosad.github.io/drat/', type='source')`
```

```
summary(world["gdpPercap"])
```

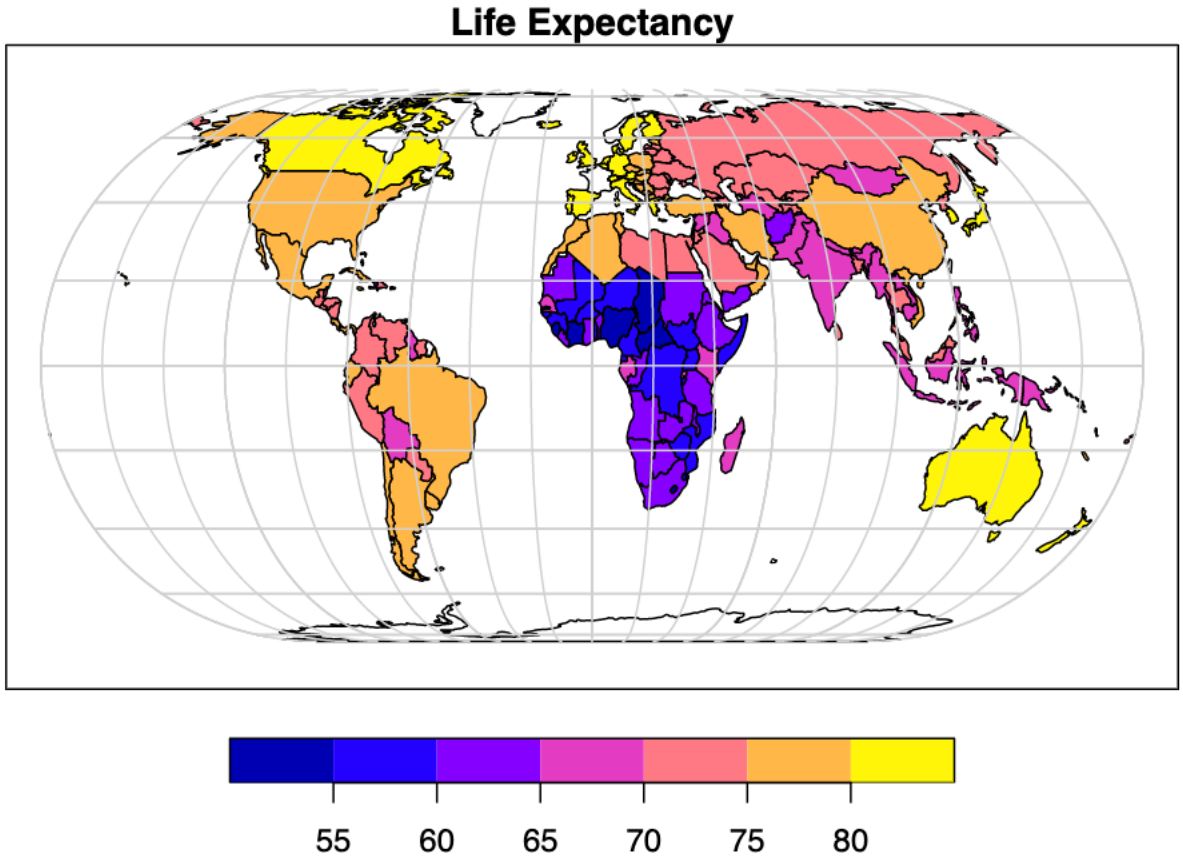
```
##    gdpPercap
##  Min.   :   597.1
##  1st Qu.:  3752.4
##  Median : 10734.1
##  Mean   : 17106.0
##  3rd Qu.: 24232.7
##  Max.   :120860.1
##  NA's   :17
```

Example 2:

```
# example 2: plotting a map of life expectancy for the 177 countries in the data set
library("sf")
```

```
## Linking to GEOS 3.5.1, GDAL 2.2.2, PROJ 4.9.2
```

```
world_proj <- st_transform(world, "+proj=eck4")
par(mar = c(0, 0, 0, 0))
lines <- st_graticule()
lines <- st_transform(lines, crs = "+proj=eck4")
plot(world_proj["lifeExp"], main="Life Expectancy", graticule=T, reset=FALSE)
plot(lines$geometry, add = TRUE, col = "lightgrey")
```

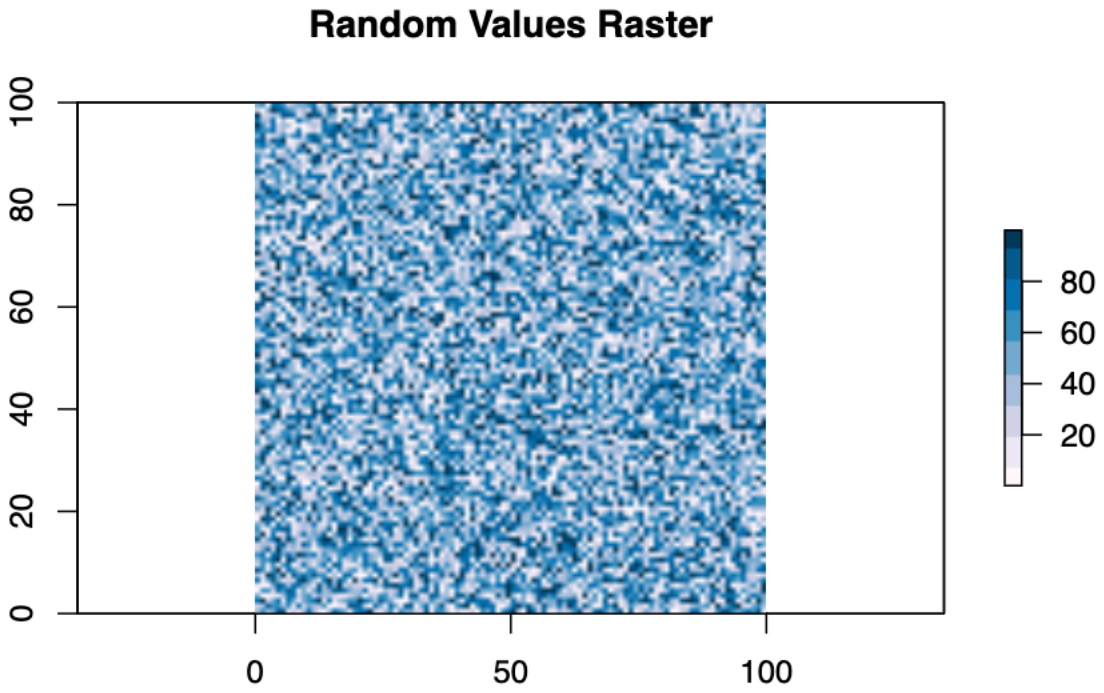


Example 3:

```
# example 3: raster of random numbers
library(RColorBrewer)
library(raster)
```

```
## Loading required package: sp
```

```
valrast <- runif(10000,0,100)
cols <- brewer.pal(n = 9, name = "PuBu")
my_raster <- raster(nrows = 100, ncols = 100, xmn=0,xmx=100,ymn=0,ymx=100, res=1, vals =valrast)
plot(my_raster, col=cols, main="Random Values Raster")
```



- Rendering in pdf

Uploaded to GitHub