-Emory covid dataset

-30 min lecture – 30 min hands-on x2

-Course notes in advance.

-Reminder to install R/Studio in advance

-Open hands-on session w/available solutions

-Separate R scripts

-R user group

**Powerpoint 1**

* What is R/Studio
* Tour of Studio
* What’s a package?
* What’s a function
  + Function()
* Case sensitivity
  + Hidden spaces
  + Naming consistency
* Common packages
  + Tidyverse
* Common syntax
  + $
  + #
  + ()
  + [row,col]
  + %>%
* Why .csv?

**Hands-on 1**

* Alex’s grad school workshop
* Read.csv()
* Data exploration
* Basic calculation within dataframe (new column)
* Subset() or filter()
  + And base-R indexing example.
* Dplyr
  + Mutate()
  + Group\_by()
  + Summarise()
* Build a query and summarize.
  + Then, use mutate() to build a new variable.
* Write.csv()

**Powerpoint 2**

* As.Date() vs. lubridate
* Pivot\_wider() + pivot\_longer()
* Ggplot2
  + Explain layering of geom\_ objects
  + Plot of mutated data
* Resources for visualization libraries
* Theme()
  + Fun themes that are available
  + Color palettes

**Hands-on 2**

* Applying as.Date()
* Pivot\_wider() + pivot\_longer()
* Building first ggplot
* Resources for visualization libraries
* Reverse engineering challenge

**cliu822**