Project 1

Name:
Partner:

2020-04-05

Contents

Background

The World Health Organization has recently employed a new data science initiative, *CSIT-165*, that uses data science to characterize pandemic diseases. *CSIT-165* disseminates data driven analyses to global decision makers.

CSIT-165 is a conglomerate comprised of two fabricated entities: *Global Health Union (GHU)* and *Private Diagnostic Laboratories (PDL)*. Your and your partner's role is to play a data scientist from one of these two entities.

Data

> 2019 Novel Coronavirus COVID-19 (2019-nCoV) Data Repository by John Hopkins CSSE Data for 2019 Novel Coronavirus is operated by the John Hopkins University Center for Systems Science and Engineering (JHU CSSE). Data includes daily time series CSV summary tables, including confirmations, recoveries, and deaths. Country/region are countries/regions hat conform to World Health Organization (WHO). Lat and Long refer to coordinates references for the user. Date fields are stored in MM/DD/YYYY format.

Project Objectives

######Make function definition file############ ######Make data grab happen in one place####### ### Objective 1

```
# Algorithm
# Step1. Read in csv files.
# Step2. find which column is the first day.
# Step3. Make a list of the first days places as keys and with a count as the value
# Step4. go through the list and look for the max count, the corresponding location is the origin.
```

```r
# Step5. Print the location.
add_first_day_cases <- function(lst, data_frame){
  for (i in 1:nrow(data_frame))
  {
    #key will be the name of the place without spaces added.
    key <- paste0(data_frame[ i, 1], " ", data_frame[ i, 2])

    num_of_cases <- data_frame[ i, 5]

    if (num_of_cases > 0 && is.null(lst[[key]]))
    {
      lst[[key]] <- num_of_cases
    }
    else if (num_of_cases > 0)
    {
      lst[[key]] <- lst[[key]] + num_of_cases
    }
    else
    {
      #do nothing
    }
  }
  lst # return lst
}

# read in data
confirmed <- read.csv(file="../data/time_series_covid19_confirmed_global.csv", stringsAsFactors = FALSE)

recovered <- read.csv(file="../data/time_series_covid19_recovered_global.csv", stringsAsFactors = FALSE)

deaths <- read.csv(file="../data/time_series_covid19_deaths_global.csv", stringsAsFactors = FALSE)

first_day_cases <- list()

# call function for each data set.
first_day_cases <- add_first_day_cases(first_day_cases, confirmed)

first_day_cases <- add_first_day_cases(first_day_cases, recovered)

first_day_cases <- add_first_day_cases(first_day_cases, deaths)

#Output answer
places <- names(first_day_cases)

ground_zero <- places[which.max(first_day_cases)]

print(paste0("Ground zero for the virus seems to be ", ground_zero, "."))
```

```
## [1] "Ground zero for the virus seems to be Hubei China."
```

Objective 1, Answer: We believe this to be the origin because it has the maximum number of cases on day 0. The dataset begins with the recorded cases starting with date 1/22/20, which is after the first case globally was found. The day that the first case for any area was recorded is not included within the dataset. To find the most likely area to have the global first case it is believed that the area would have the most cases by

1/22/20. See code comments for how the number of cases was computed.

Objective 2

```
confirmed <- read.csv(file="../data/time_series_covid19_confirmed_global.csv", stringsAsFactors = FALSE)

#Dataframe to contain Providence and Country for the places with the most recent first cases
recent_places <- data.frame(Providence = nrow(confirmed), Country = ncol(confirmed))

y <- 1

#iterates through rows
for(x in 1:nrow(confirmed)){

  #Start at the last column
  i <- ncol(confirmed)

  #Values for the number of cases
  new_cases <- confirmed[x,i]

  #Values for the number of cases the day before
  cases_before <- confirmed[x,(i-1)]

  #The first date of instance
  if (new_cases > 0 && cases_before == 0){

    recent_places[y,1:2] <- confirmed[x,1:2]

    y <- y + 1

  } else {

  #Move back one column to find previous day if no matches found
  i <- i - 1

  }
}

#Change dataframe to correct size
recent_places <- recent_places[1:(y-1),]

print(recent_places)
```

```
##                            Providence     Country
## 1   Bonaire, Sint Eustatius and Saba Netherlands
## 258                                       Malawi
```

Objective 3

```
confirmed <- read.csv(file="../data/time_series_covid19_confirmed_global.csv", stringsAsFactors = FALSE)

#Dataframe to contain Providence, Country, Lat and Long for the places with the most recent first cases
```

```
recent_places <- data.frame(Providence = nrow(confirmed), Country = ncol(confirmed), Lat = nrow(confirm

y <- 1

#iterates through rows
for(x in 1:nrow(confirmed)){

  #Start at the last column
  i <- ncol(confirmed)

  #Values for the number of cases
  new_cases <- confirmed[x,i]

  #Values for the number of cases the day before
  cases_before <- confirmed[x,(i-1)]

  #The first date of instance
  if (new_cases > 0 && cases_before == 0){

    recent_places[y,1:4] <- confirmed[x,1:4]

    y <- y + 1

  } else {

  #Move back one column to find previous day if no matches found
  i <- i - 1

  }
}

#Change dataframe to correct size
recent_places <- recent_places[1:(y-1),]

y <- 1

first_place <- data.frame(Providence = 1, Country = 1, Lat = 1, Long = 1)

cases_number <- 0

for (x in 1:nrow(confirmed)) {

  #Start at first column of case number data
  i <- 5

  #Values for the number of cases
  cases <- confirmed[x,i]

  #Largest number of cases on earliest day reported
  if (cases > cases_number)

    {
    first_place[1,1:4] <- confirmed[x,1:4]
```

```
    cases_number <- confirmed[x,i]
    }
  else

  {
    #Move to next day if no cases found
    i <- i + 1

  }
}
#Distance in meters from origin
dist_meter <- geosphere::distm(recent_places[,4:3], first_place[1,4:3], fun = distGeo)

#Distance in miles from origin
dist_mile <- dist_meter/1609.344

#Dataframe with print information
full_info <- data.frame(recent_places[,2], dist_mile[], first_place[,1:2])

#Order by distance from least to greatest
ordered_info <- full_info[order(dist_mile),]

cat(paste0(ordered_info[,1], " is ", ordered_info[,2], " miles away from ", ordered_info[,3], ", ", ord
```

```
## Malawi is 5995.13451140562 miles away from Hubei, China
##  Netherlands is 9462.57362053801 miles away from Hubei, China
```

Objective 4

Objective 4.1

```
#Algorithm
#Step1. Find the risk for each area
#Step2. Find the burden for each area
#Step3. Find global risk and confirmed

# read in data
confirmed <- read.csv(file="../data/time_series_covid19_confirmed_global.csv", stringsAsFactors = FALSE)

recovered <- read.csv(file="../data/time_series_covid19_recovered_global.csv", stringsAsFactors = FALSE)

deaths <- read.csv(file="../data/time_series_covid19_deaths_global.csv", stringsAsFactors = FALSE)

#Find global data
global_confirmations <- sum(confirmed[, length(confirmed)])

global_recoveries <- sum(recovered[, length(recovered)])

global_deaths <- sum(deaths[, length(deaths)])

global_risk <- global_deaths / global_recoveries

global_burden <- global_confirmations * global_risk
```

```
modified_confirmed <- left_join(recovered, confirmed, by = c("Province.State", "Country.Region"))
modified_deaths <- left_join(recovered, deaths, by = c("Province.State", "Country.Region"))

risk <- modified_deaths[, ncol(modified_deaths)] / recovered[ , ncol(recovered)]

burden <- modified_confirmed[, ncol(modified_confirmed)] * risk

recovered_with_scores <- mutate(
  recovered,
  risk_score = risk,
  burden_score = burden
)

#Pick only the 4 neccassary columns.
mins_risk <- select(
  filter(recovered_with_scores, risk_score == min(recovered_with_scores$risk_score, na.rm = TRUE)),
  Province.State, Country.Region, risk_score, burden_score
)

maxs_risk <- select(
  filter(recovered_with_scores, risk_score == max(recovered_with_scores$risk_score, na.rm = TRUE, inf.r
  Province.State, Country.Region, risk_score, burden_score
)

#Output this is the data to read
print(paste0("The global risk is ", global_risk))
```

```
## [1] "The global risk is 0.260354479264469"
```

```
print(paste0("The global burden is ", global_burden))
```

```
## [1] "The global burden is 263779.963148151"
```

```
mins_risk
```

```
##      Province.State                  Country.Region risk_score burden_score
## 1   South Australia                       Australia          0            0
## 2                                            Benin          0            0
## 3                                           Bhutan          0            0
## 4                                         Cambodia          0            0
## 5           Jiangsu                          China          0            0
## 6             Macau                          China          0            0
## 7           Ningxia                          China          0            0
## 8           Qinghai                          China          0            0
## 9            Shanxi                          China          0            0
## 10             Tibet                          China          0            0
## 11    Faroe Islands                        Denmark          0            0
## 12        Greenland                        Denmark          0            0
## 13                                        Djibouti          0            0
## 14                               Equatorial Guinea          0            0
## 15                                        Ethiopia          0            0
## 16    French Guiana                         France          0            0
## 17    New Caledonia                         France          0            0
## 18          Reunion                         France          0            0
## 19 Saint Barthelemy                         France          0            0
```

```
## 20                                        Georgia          0            0
## 21                                         Guinea          0            0
## 22                                          Haiti          0            0
## 23                                         Kuwait          0            0
## 24                                        Maldives         0            0
## 25                                           Malta         0            0
## 26                                        Mongolia         0            0
## 27                                         Namibia         0            0
## 28                                           Nepal         0            0
## 29           Aruba                     Netherlands         0            0
## 30                                     Saint Lucia         0            0
## 31                 Saint Vincent and the Grenadines         0            0
## 32                                         Somalia         0            0
## 33         Bermuda                United Kingdom         0            0
## 34       Gibraltar                United Kingdom         0            0
## 35                                         Vietnam         0            0
```

```
maxs_risk
```

```
##    Province.State Country.Region risk_score burden_score
## 1                      Cabo Verde        Inf          Inf
## 2                     El Salvador        Inf          Inf
## 3                          Guyana        Inf          Inf
## 4                           Libya        Inf          Inf
## 5                            Mali        Inf          Inf
## 6                       Mauritius        Inf          Inf
## 7                       Nicaragua        Inf          Inf
## 8                           Niger        Inf          Inf
## 9                          Serbia        Inf          Inf
## 10                       Suriname        Inf          Inf
## 11                          Syria        Inf          Inf
## 12 Cayman Islands United Kingdom        Inf          Inf
## 13    Isle of Man United Kingdom        Inf          Inf
## 14                       Zimbabwe        Inf          Inf
## 15                          Burma        Inf          Inf
## 16                     MS Zaandam        Inf          Inf
## 17                       Botswana        Inf          Inf
```

Objective 4.1 Questions Question 1. China has the lowest risk rate. We believe this could be because they are ground zero, thus allowing more people to recover and thus driving down the risk rate. Furthermore, China has enacted many containment policies. The data may also not be accurate due to reasons unknown to us statisticians in training.

Question 2. So the places with the highest risk scores are the Pacific Islands and some African nations and islands. It seems places highest are the places with the least exposure.

Question 3. The low risk scores are pretty small and close to the global risk score. However, the risk scores of the maxs is not close to the global risk score. They could be outliers.

Question 4. The least risks and most risks places of the world have the same burden scores as their risk scores. This occured because burden is the sum of confirmed times the risk score, thus if you have zero risk you will have zero burden, and if you have infinite risk you will have infinite burden. This also makes sense analytically since burden corresponds to risk.

Question 5. Some of these values seem reasonable for example not have any risk because nobody has died yet. But, having infinite risk because we performed a divide by zero because no one has recovered yet.

Question 6. As already stated this discrepancy occurs when a zero appears in the denonimator.Or when a

data point is missing. Or when we have a NaN in the data set.

Question 7. It could be helpful to tell the the ratio of deaths to recoveries. However, it does not account for other factors such as people who have it and to not report or people who do not know that they have it and recover. The final thing is that the report relies on honesty and willing to share data, and all players sadly are not.

Objective 4.2

```
#Generates total data frames
generate_total_df <- function(places, sums, column_name)
{
  countries <- vector()

  total_cases <- vector()

  for (i in 1:length(places)){

    if (is.element(places[i], countries)){

      new <- match(places[i], countries)

      total_cases[new] <- total_cases[new] + sums[i]

    }
    else{

      countries <- c(countries, places[i])

      total_cases <- c(total_cases, sums[i])

    }
  }

  total_cases <- data.frame(countries, total_cases)

  colnames(total_cases) <- c("countries", column_name)

  total_cases

}

#Read input from csv files

confirmed <- read.csv(file="../data/time_series_covid19_confirmed_global.csv", stringsAsFactors = FALSE)

recovered <- read.csv(file="../data/time_series_covid19_recovered_global.csv", stringsAsFactors = FALSE)

deaths <- read.csv(file="../data/time_series_covid19_deaths_global.csv", stringsAsFactors = FALSE)

#calculate the sums of each

sums_confirmed <- confirmed[, ncol(confirmed)]
```

```r
sums_recoveries <- recovered[, ncol(recovered)]

sums_deaths <- deaths[, ncol(deaths)]

#Generate the totals

total_confirmations <- generate_total_df(confirmed$Country.Region, sums_confirmed, "total_confirmations

total_recoveries <- generate_total_df(recovered$Country.Region,  sums_recoveries, "total_recoveries")

total_deaths <- generate_total_df(deaths$Country.Region, sums_deaths, "total_deaths")

#Sort the data_frames
total_confirmations_sorted <- arrange(total_confirmations, -total_confirmations)

total_recoveries_sorted <-arrange(total_recoveries, -total_recoveries)

total_deaths_sorted <- arrange(total_deaths, -total_deaths)

#Output the data_frames as a table

kable(total_confirmations_sorted[1:5,])
```

countries	total_confirmations
US	243453
Italy	115242
Spain	112065
Germany	84794
China	82432

```r
kable(total_recoveries_sorted[1:5,])
```

countries	total_recoveries
China	76760
Spain	30513
Germany	24575
Italy	19758
Iran	17935

```r
kable(total_deaths_sorted[1:5,])
```

countries	total_deaths
Italy	14681
Spain	11198
US	7087
France	6520
United Kingdom	3611

GitHub Log

```
git log --pretty=format:"%nSubject: %s%nAuthor: %aN%nDate: %aD%nBody: %b"
```

```
##
## Subject: add answers  to questions in 4.1.
## Author: Nobody
## Date: Sun, 5 Apr 2020 19:57:55 -0700
## Body:
##
## Subject: Merge branch 'master' of https://github.com/holderkayla/RGroupProject
## Author: Nobody
## Date: Sun, 5 Apr 2020 19:55:36 -0700
## Body:
##
## Subject: add answers  to questions in 4.1.
## Author: Nobody
## Date: Sun, 5 Apr 2020 19:55:16 -0700
## Body:
##
## Subject: update the objective header
## Author: Brandon Nuttall
## Date: Sun, 5 Apr 2020 19:46:47 -0700
## Body:
##
## Subject: updated the yaml headers
## Author: Brandon Nuttall
## Date: Sun, 5 Apr 2020 19:41:56 -0700
## Body:
##
## Subject: Add dplyr to beginning
## Author: Kayla Holder
## Date: Sun, 5 Apr 2020 19:41:28 -0700
## Body: This commit will remove the necessity to repeatedly use library to call dplyr throughout the c
##
##
## Subject: Update Objective 2
## Author: Kayla Holder
## Date: Sun, 5 Apr 2020 19:30:39 -0700
## Body: This commit will update objective 2 to find the places with the most recent first cases
##
##
## Subject: Update Objective 1 question
## Author: Kayla Holder
## Date: Sun, 5 Apr 2020 19:22:33 -0700
## Body: This commit will update the written answer for objective 1 question.
##
##
## Subject: add global results to 4.1
## Author: Nobody
## Date: Sun, 5 Apr 2020 19:00:38 -0700
## Body:
##
## Subject: format obj 4.1
```

```
## Author: Nobody
## Date: Sun, 5 Apr 2020 18:49:05 -0700
## Body:
##
## Subject: Merge branch 'master' of https://github.com/holderkayla/RGroupProject
## Author: Nobody
## Date: Sun, 5 Apr 2020 18:43:03 -0700
## Body:
##
## Subject: Help
## Author: Nobody
## Date: Sun, 5 Apr 2020 18:41:17 -0700
## Body:
##
## Subject: add global risk score to objective 4.2
## Author: Brandon Nuttall
## Date: Sun, 5 Apr 2020 18:40:17 -0700
## Body:
##
## Subject: rollback to a previous version
## Author: Brandon Nuttall
## Date: Sun, 5 Apr 2020 18:09:15 -0700
## Body:
##
## Subject: Merge branch 'master' of https://github.com/holderkayla/RGroupProject
## Author: Nobody
## Date: Sun, 5 Apr 2020 18:05:06 -0700
## Body:
##
## Subject: add to obj 4.1 risk_score and burden_score
## Author: Nobody
## Date: Sun, 5 Apr 2020 18:04:46 -0700
## Body:
##
## Subject: refactor objective 4.2
## Author: Brandon Nuttall
## Date: Sun, 5 Apr 2020 17:44:45 -0700
## Body:
##
## Subject: add dplyr to obj 4.1
## Author: Nobody
## Date: Sun, 5 Apr 2020 14:53:40 -0700
## Body:
##
## Subject: refactor obj4.2 to use dplyr
## Author: Nobody
## Date: Sun, 5 Apr 2020 14:20:58 -0700
## Body:
##
## Subject: fix objective 4.2
## Author: Brandon Nuttall
## Date: Sun, 5 Apr 2020 13:08:33 -0700
## Body:
##
```

```
## Subject: provide a refactor of objective 4.2, by reducing redundancy, enhancing readability and fulfi
## Author: Nobody
## Date: Sun, 5 Apr 2020 02:04:13 -0700
## Body:
##
## Subject: refactor objective 4.2, using a function
## Author: Nobody
## Date: Sat, 4 Apr 2020 23:59:48 -0700
## Body:
##
## Subject: merge changes
## Author: Nobody
## Date: Sat, 4 Apr 2020 23:24:43 -0700
## Body:
##
## Subject: updating objective 4.2
## Author: Brandon Nuttall
## Date: Sat, 4 Apr 2020 23:24:02 -0700
## Body:
##
## Subject: updating obj 4.2
## Author: Brandon Nuttall
## Date: Sat, 4 Apr 2020 23:12:28 -0700
## Body:
##
## Subject: changes objective 4.2
## Author: Brandon Nuttall
## Date: Sat, 4 Apr 2020 22:47:54 -0700
## Body:
##
## Subject: Merge branch 'master' of https://github.com/holderkayla/RGroupProject
## Author: Nobody
## Date: Sat, 4 Apr 2020 22:15:22 -0700
## Body:
##
## Subject: resolve merge conflicts
## Author: Nobody
## Date: Sat, 4 Apr 2020 22:15:15 -0700
## Body:
##
## Subject: Revert to Brandon's version
## Author: Kayla Holder
## Date: Sat, 4 Apr 2020 22:14:25 -0700
## Body: Revert to Brandon's version
##
##
## Subject: updates objective 4.1
## Author: Nobody
## Date: Sat, 4 Apr 2020 22:03:17 -0700
## Body:
##
## Subject: Update objective 4.2
## Author: Kayla Holder
## Date: Sat, 4 Apr 2020 22:02:29 -0700
```

```
## Body: Remove comments at the bottom of code chunk for objective 4.2
##
##
## Subject: Merge branch 'master' of https://github.com/holderkayla/RGroupProject
## Author: Nobody
## Date: Sat, 4 Apr 2020 20:15:46 -0700
## Body:
##
## Subject: change objective 4.1
## Author: Nobody
## Date: Sat, 4 Apr 2020 20:15:00 -0700
## Body:
##
## Subject: Update .Rhistory
## Author: Kayla Holder
## Date: Sat, 4 Apr 2020 19:57:14 -0700
## Body: Update history
##
##
## Subject: Add comments within Objective 3
## Author: Kayla Holder
## Date: Sat, 4 Apr 2020 18:49:46 -0700
## Body: This commit will add comments within the code chunk for objective 3.
##
##
## Subject: Update Objective 3
## Author: Kayla Holder
## Date: Sat, 4 Apr 2020 18:33:48 -0700
## Body: This commit will provide a data frame that orders the distance from origin from least to greate
##
##
## Subject: add unfinished objective 4.2
## Author: Brandon Nuttall
## Date: Sat, 4 Apr 2020 15:45:28 -0700
## Body:
##
## Subject: Clean up Objective 3
## Author: Kayla Holder
## Date: Sat, 4 Apr 2020 15:41:19 -0700
## Body: This commit will remove extra spacing and unnecessary statements from objective 3
##
##
## Subject: add unfinished objetive 4.2
## Author: Brandon Nuttall
## Date: Sat, 4 Apr 2020 15:41:18 -0700
## Body:
##
## Subject: Update Objective 3
## Author: Kayla Holder
## Date: Sat, 4 Apr 2020 15:38:54 -0700
## Body: This update completes objective 3.
##
##
## Subject: add incomplete objective 4.2
```

```
## Author: Brandon Nuttall
## Date: Sat, 4 Apr 2020 15:38:29 -0700
## Body:
##
## Subject: Merge branch 'master' of https://github.com/holderkayla/RGroupProject
## Author: Kayla Holder
## Date: Sat, 4 Apr 2020 14:11:19 -0700
## Body:
##
## Subject: Update to history
## Author: Kayla Holder
## Date: Sat, 4 Apr 2020 14:11:00 -0700
## Body: Update to history needed to for me to pull origin
##
##
## Subject: Add objective 2
## Author: Brandon Nuttall
## Date: Sat, 4 Apr 2020 14:05:35 -0700
## Body:
##
## Subject: add to objective 2
## Author: Brandon Nuttall
## Date: Sat, 4 Apr 2020 14:02:32 -0700
## Body:
##
## Subject: add imcomplete Objective 4.1
## Author: Nobody
## Date: Sat, 4 Apr 2020 13:50:11 -0700
## Body:
##
## Subject: comments on how to format file
## Author: Nobody
## Date: Sat, 4 Apr 2020 13:09:47 -0700
## Body:
##
## Subject: Merge branch 'master' of https://github.com/holderkayla/RGroupProject
## Author: Nobody
## Date: Sat, 4 Apr 2020 13:07:42 -0700
## Body:
##
## Subject: comments on how to format file
## Author: Nobody
## Date: Sat, 4 Apr 2020 13:07:04 -0700
## Body:
##
## Subject: Merge branch 'master' of https://github.com/holderkayla/RGroupProject
## Author: Kayla Holder
## Date: Sat, 4 Apr 2020 12:46:25 -0700
## Body:
##
## Subject: Updated objective 3
## Author: Kayla Holder
## Date: Sat, 4 Apr 2020 12:46:22 -0700
## Body: Created dataframe to contain the places with the most recent first cases
```

```
##
##
## Subject: Merge branch 'master' of https://github.com/holderkayla/RGroupProject
## Author: Nobody
## Date: Sat, 4 Apr 2020 12:43:51 -0700
## Body:
##
## Subject: add objective 1
## Author: Nobody
## Date: Sat, 4 Apr 2020 12:41:52 -0700
## Body:
##
## Subject: Merge branch 'master' of https://github.com/holderkayla/RGroupProject
## Author: Kayla Holder
## Date: Sat, 4 Apr 2020 12:25:30 -0700
## Body:
##
## Subject: Objective 3 update
## Author: Kayla Holder
## Date: Sat, 4 Apr 2020 12:25:23 -0700
## Body: Trying a different method to find the most recent area to have a first case.
##
##
## Subject: fix obj2 problem
## Author: Nobody
## Date: Sat, 4 Apr 2020 12:05:10 -0700
## Body:
##
## Subject: fix obj2 problem
## Author: Nobody
## Date: Sat, 4 Apr 2020 11:38:06 -0700
## Body:
##
## Subject: Structure the project
## Author: Nobody
## Date: Sat, 4 Apr 2020 10:07:33 -0700
## Body:
##
## Subject: Fix merge conflict
## Author: Nobody
## Date: Sat, 4 Apr 2020 09:55:16 -0700
## Body:
##
## Subject: Qbj1
## Author: Nobody
## Date: Fri, 3 Apr 2020 22:38:59 -0700
## Body:
##
## Subject: Working on objective 2
## Author: Brandon Nuttall
## Date: Fri, 3 Apr 2020 22:34:44 -0700
## Body:
##
## Subject: Merge branch 'master' of https://github.com/holderkayla/RGroupProject
```

```
## Author: Nobody
## Date: Fri, 3 Apr 2020 22:28:19 -0700
## Body:
##
## Subject: Merge branch 'master' of https://github.com/holderkayla/RGroupProject
## Author: Kayla Holder
## Date: Fri, 3 Apr 2020 22:28:14 -0700
## Body:
##
## Subject: Delete Objective3KH.Rmd
## Author: Kayla Holder
## Date: Fri, 3 Apr 2020 22:28:01 -0700
## Body:
##
## Subject: Test Merge
## Author: Nobody
## Date: Fri, 3 Apr 2020 22:27:49 -0700
## Body:
##
## Subject: Objective 3 update
## Author: Kayla Holder
## Date: Fri, 3 Apr 2020 22:27:35 -0700
## Body: My progress so far with objective 3. It is very clunky and not ready to be used yet.
##
##
## Subject: Starting objective 2
## Author: Brandon Nuttall
## Date: Fri, 3 Apr 2020 22:26:14 -0700
## Body:
##
## Subject: Delete Objective3KH.Rmd
## Author: holderkayla
## Date: Fri, 3 Apr 2020 22:24:43 -0700
## Body: Incorrectly inputted my changes
##
## Subject: Objective 3
## Author: Kayla Holder
## Date: Fri, 3 Apr 2020 22:22:07 -0700
## Body: Clunky version of objective 3. Many issues, just using as beginning reference to myself.
##
##
## Subject: Test on merge
## Author: Nobody
## Date: Fri, 3 Apr 2020 22:19:15 -0700
## Body:
##
## Subject: Merge branch 'master' of https://github.com/holderkayla/RGroupProject
## Author: Kayla Holder
## Date: Fri, 3 Apr 2020 22:15:16 -0700
## Body:
##
## Subject: It is me, Kayla saying Hi
## Author: Kayla Holder
## Date: Fri, 3 Apr 2020 22:15:09 -0700
```

```
## Body:
##
## Subject: Added template
## Author: Nobody
## Date: Fri, 3 Apr 2020 20:04:46 -0700
## Body:
##
## Subject: Death data
## Author: Nobody
## Date: Fri, 3 Apr 2020 19:50:58 -0700
## Body:
##
## Subject: Group Project file
## Author: Nobody
## Date: Fri, 3 Apr 2020 19:42:22 -0700
## Body:
##
## Subject: Recovery data set
## Author: Brandon Nuttall
## Date: Fri, 3 Apr 2020 19:29:03 -0700
## Body:
##
## Subject: Did we do it
## Author: Nobody
## Date: Fri, 3 Apr 2020 19:02:23 -0700
## Body:
##
## Subject: Added Confirmed Cases Data
## Author: Kayla Holder
## Date: Fri, 3 Apr 2020 15:59:38 -0700
## Body:
##
## Subject: Update README.md
## Author: holderkayla
## Date: Fri, 3 Apr 2020 09:48:46 -0700
## Body:
##
## Subject: Initial commit
## Author: holderkayla
## Date: Wed, 1 Apr 2020 15:05:23 -0700
## Body:
```