270 Individual Project

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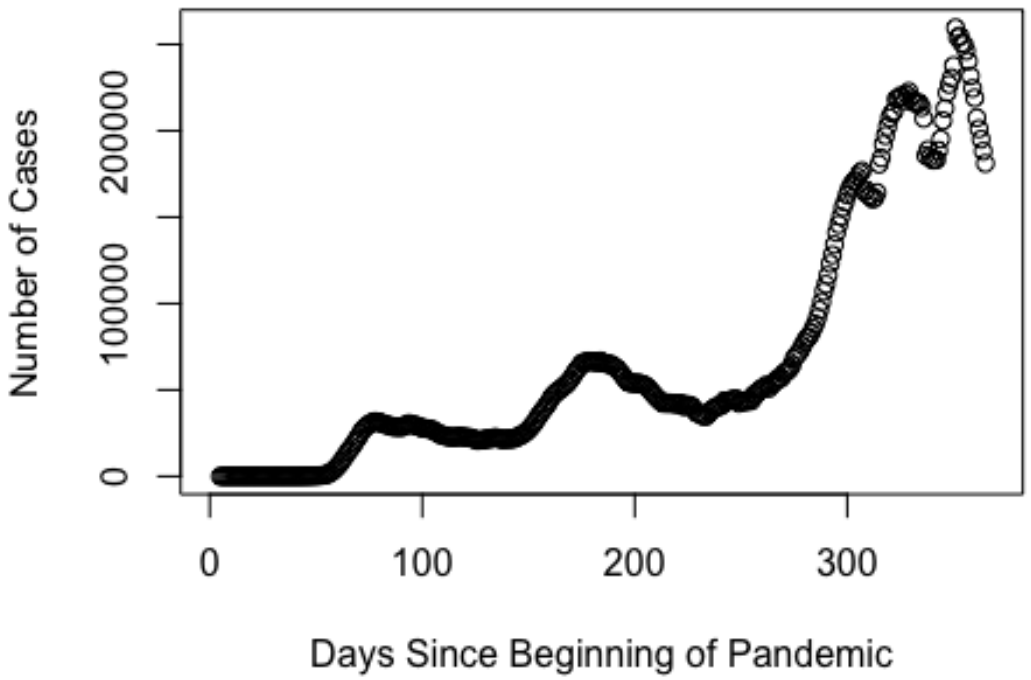
We first load the necessary libraries and the data provided by the instructor

```
#both data sets are needed at different stages of the project
uscounties=read.csv("us-counties.csv")
allofit=read_csv("all-states-history.csv")
```

Figure 1 is quite easily reproducible after a few steps of data manipulation

```
# first figure
new=uscounties%>%group_by(date)%>%summarise(total=sum(cases))

new$new_cases=new$total-lag(new$total)
new$avg7=rollmean(new$new_cases,k=7,fill=NA)
plot(new$avg7, ylab = "Number of Cases", xlab = "Days Since Beginning of
Pandemic")
```



We here generate the first table row by row

```
#second figure/ first table
#cases
newanko=new%>%filter(date=="2021-01-17")
totalcase_reported=sum(newanko$total,na.rm = TRUE)
case_reported17=sum(newanko$new_cases,na.rm = TRUE)
case_14daychange=(201117-195042)/201117

#deaths
newi=uscounties%>%group_by(date)%>%summarise(lanmo=sum(deaths,na.rm=T))

totaldeath_reported=newi%>%filter(date=="2021-01-17")%>%select(lanmo)
newi$new_deaths=newi$lanmo-lag(newi$lanmo)
death_reported17=newi%>%filter(date=="2021-01-17")%>%select(new_deaths)
newi$avg7=rollmean(newi$new_deaths,k=7,align="right",fill=NA)

#hospitalization
allofit1=allofit%>%select(date,state,hospitalized,hospitalizedCumulative,hosp
italizedCurrently)
hh=allofit1%>%group_by(date)%>%summarise(h=sum(hospitalizedCurrently,na.rm=T)
)



hospitalization_reported17=hh%>%filter(date=="2021-01-17")%>%select(h)
hh$avg7=rollmean(hh$h,k=7,align="right",fill=NA)

# fourth and last figure/last table
#total cases
casestate=uscounties%>%group_by(state,date)
upto_17data=uscounties%>%filter(date=="2021-01-17")
oo=upto_17data%>%group_by(state)%>%summarise(tout=sum(cases))

#avg cases in last 7 days
neww=uscounties%>%group_by(state,date)%>%summarise(total=sum(cases))

neww$new_cases=neww$total-lag(neww$total)
neww$avg7=rollmean(neww$new_cases,k=7,align = "right",fill=NA)
avg7_eachstate=neww%>%filter(date=="2021-01-17")
```