Weekly Update 3

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```
library(ggplot2)
library(dplyr)
```

```
##
## Attaching package: 'dplyr'
```

```
## The following objects are masked from 'package:stats':
##
##     filter, lag
```

```
## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union
```

```
library(lubridate)
```

```
##
## Attaching package: 'lubridate'
```

```
## The following objects are masked from 'package:base':
##
##     date, intersect, setdiff, union
```

```
library(anytime)
library(epigrowthfit)
```

```
## Loading required package: TMB
```

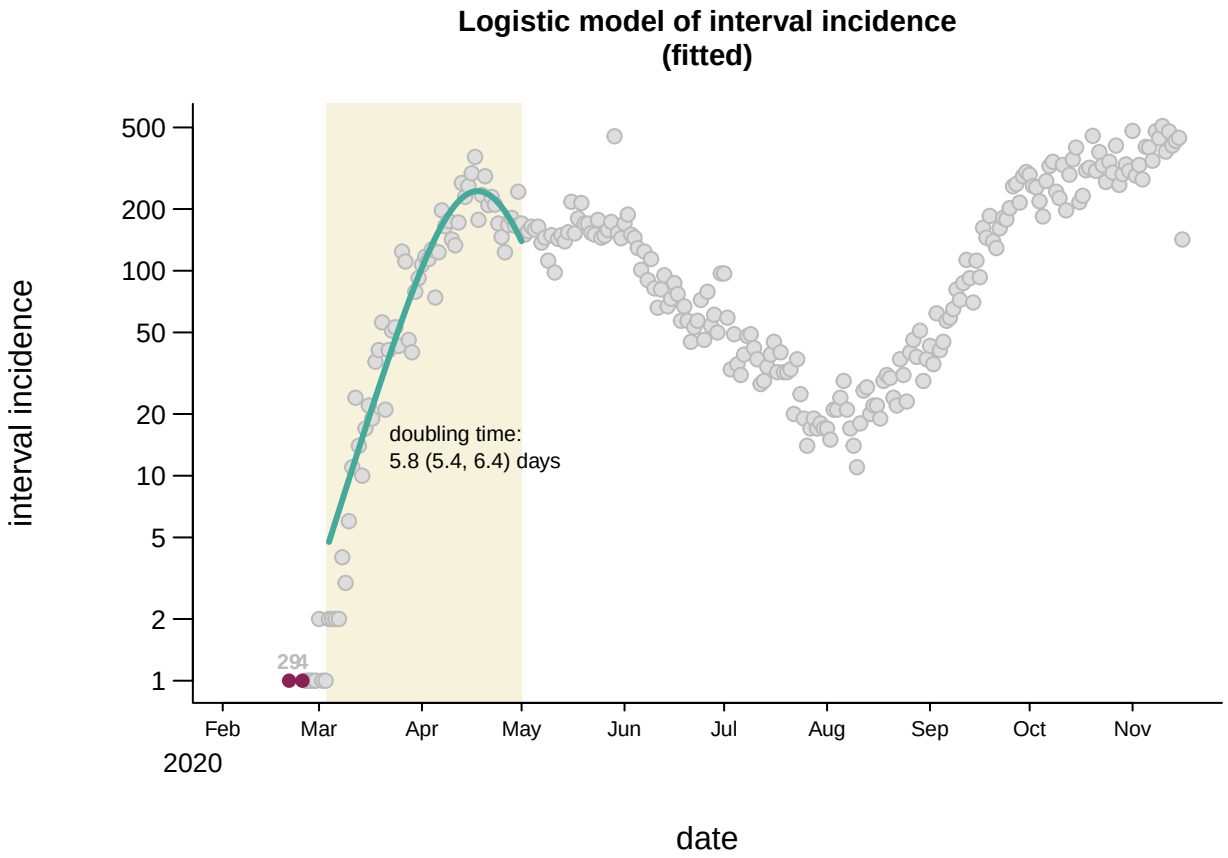
```
df <- read.csv("COVID19_cases.csv")
freq <- df %>%
  group_by(Date) %>%
  summarize(n=n())
```

```
## `summarise()` ungrouping output (override with `.groups` argument)
```

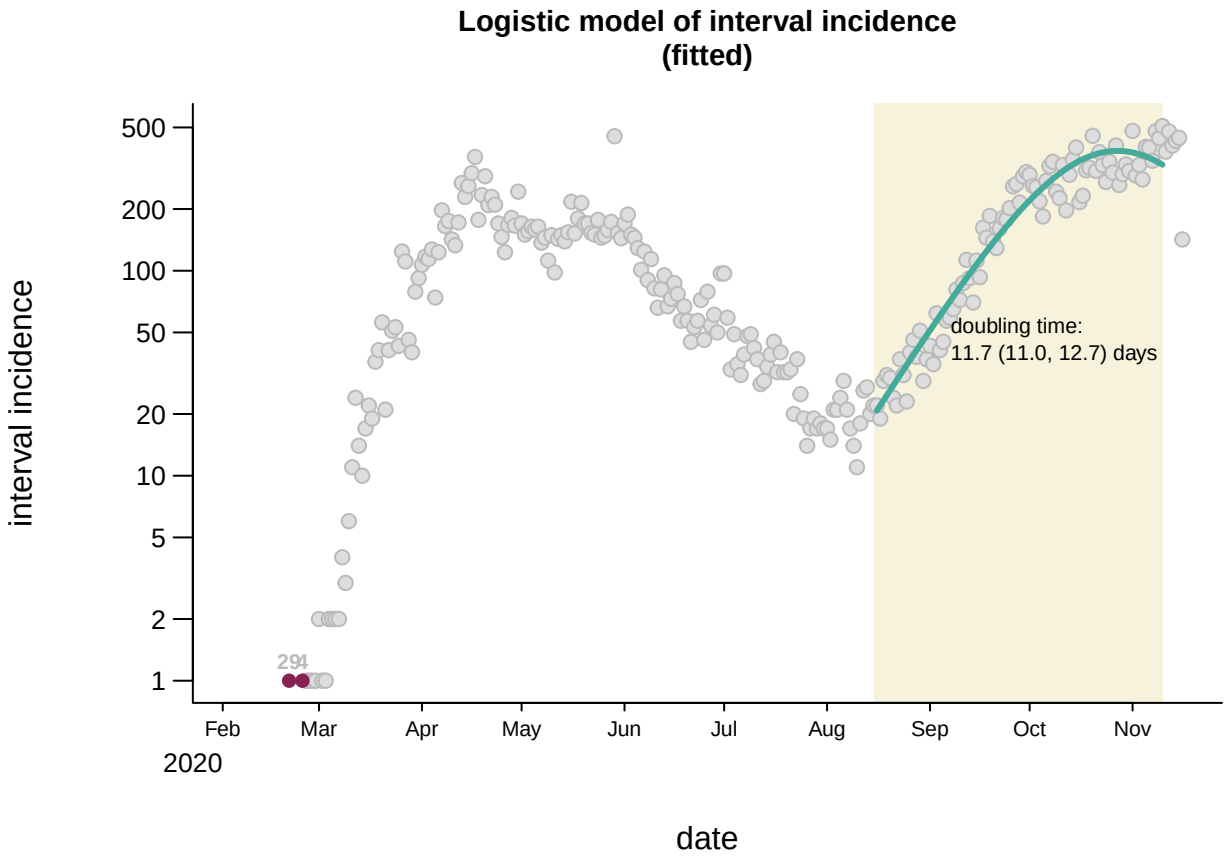
```
freq$Date <- anytime::anydate(freq$Date )
init1 <- egf_init(date = freq$Date, cases = freq$n, last = anytime::anydate("2020-05-01"))
fit1 <- egf(init1)
```

```
## Warning in nlminb(start = madf_out$par, objective = madf_out$fn, gradient =
## madf_out$gr, : NA/NaN function evaluation
```

```
plot(fit1)
```




```
init2 <- egf_init(date = freq$Date, cases = freq$n, first = anytime::anydate("2020-08-15"))
fit2 <- egf(init2)
plot(fit2)
```


Logistic model of interval incidence
(fitted)
interval incidence
500
200
100
50
20
10
5
2
1
294
doubling time:
11.7 (11.0, 12.7) days
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
2020
date