```
import matplotlib.pyplot as plt
import pandas as pd
import numpy as np
from sklearn.impute import SimpleImputer

df = pd.read_csv

df.head(10)
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[5], line 1
----> 1 df.head(10)

NameError: name 'df' is not defined
```

```
df.drop(['SNo','Last Update'],axis=1,inplace=True)
df.rename(columns={'ObservationDate':'Date','Province/State':'State','Country/Region':'Country'},inplace=True)
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[6], line 1
----> 1 df.drop(['SNo','Last Update'],axis=1,inplace=True)
      2
df.rename(columns={'ObservationDate':'Date','Province/State':'State','Country/Region':'Country'},inplace=True)

NameError: name 'df' is not defined
```

```
df['Date'] = pd.to_datetime(df['Date'])
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[7], line 1
----> 1 df['Date'] = pd.to_datetime(df['Date'])

NameError: name 'df' is not defined
```

```
imputer = SimpleImputer(strategy='constant')
df2 = pd.DataFrame(imputer.fit_transform(df),columns=df.columns)

df3 = df2.groupby(['Country','Date'])
[['Country','Date','Confirmed','Deaths','Recovered']].sum().reset_index()
```

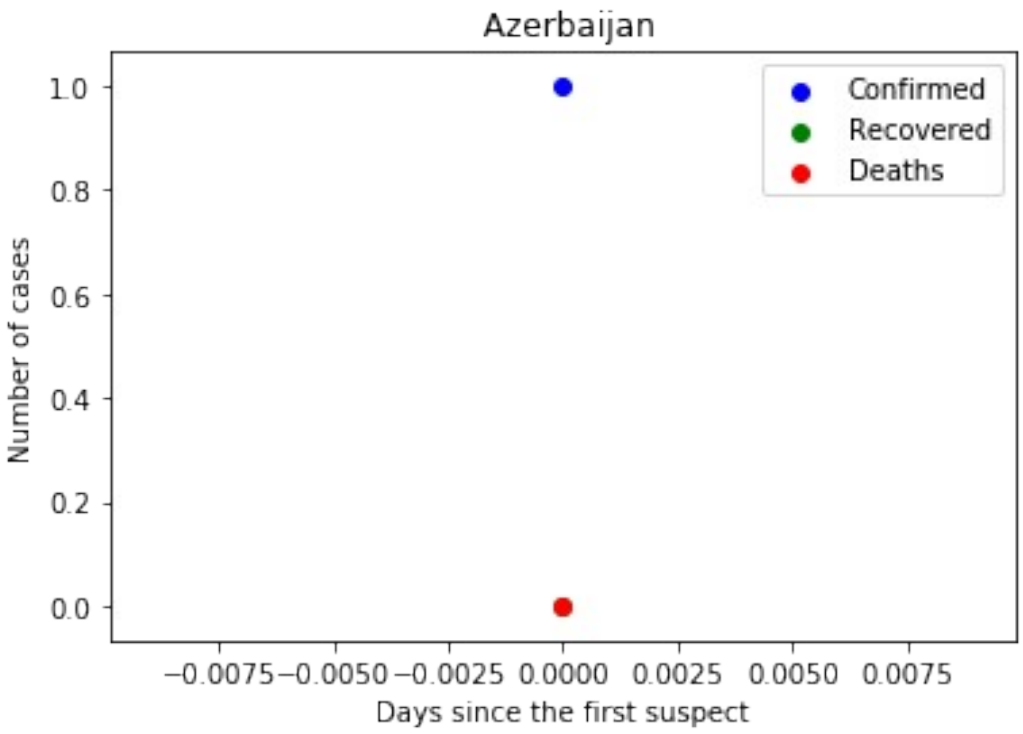
```
df3.head(20)
```

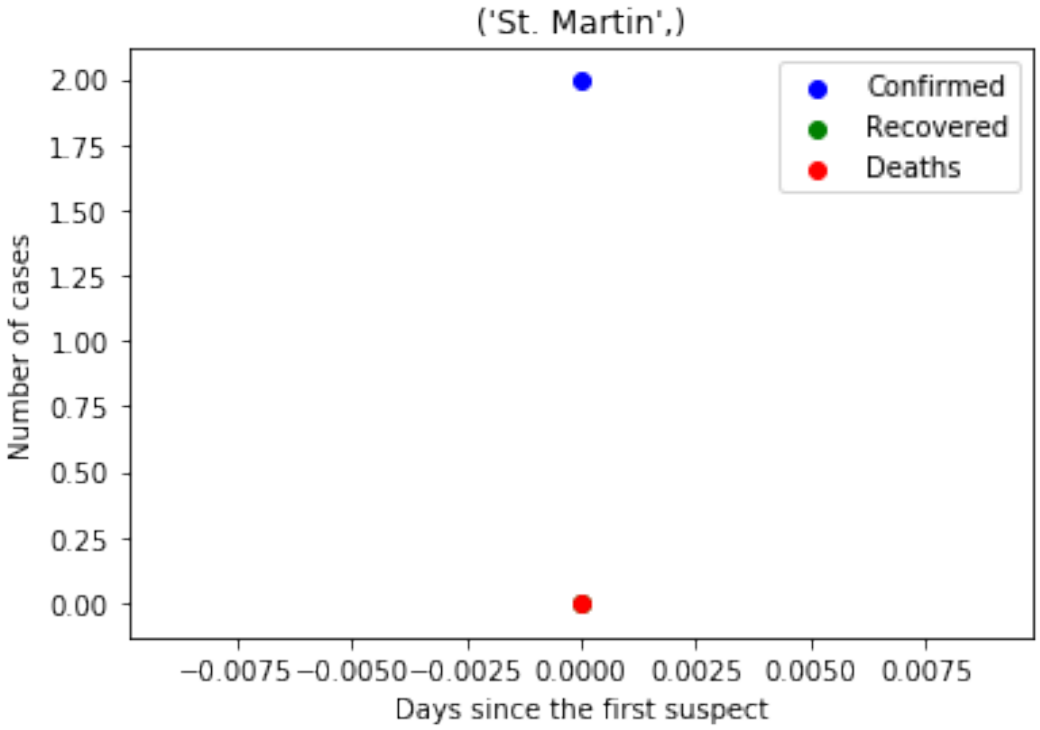
	Country	Date	Confirmed	Deaths	Recovered
0	Azerbaijan	2020-02-28	1	0	0
1	('St. Martin',)	2020-03-10	2	0	0
2	Afghanistan	2020-02-24	1	0	0
3	Afghanistan	2020-02-25	1	0	0
4	Afghanistan	2020-02-26	1	0	0
5	Afghanistan	2020-02-27	1	0	0
6	Afghanistan	2020-02-28	1	0	0
7	Afghanistan	2020-02-29	1	0	0
8	Afghanistan	2020-03-01	1	0	0
9	Afghanistan	2020-03-02	1	0	0
10	Afghanistan	2020-03-03	1	0	0
11	Afghanistan	2020-03-04	1	0	0
12	Afghanistan	2020-03-05	1	0	0
13	Afghanistan	2020-03-06	1	0	0
14	Afghanistan	2020-03-07	1	0	0
15	Afghanistan	2020-03-08	4	0	0
16	Afghanistan	2020-03-09	4	0	0
17	Afghanistan	2020-03-10	5	0	0
18	Afghanistan	2020-03-11	7	0	0
19	Afghanistan	2020-03-12	7	0	0

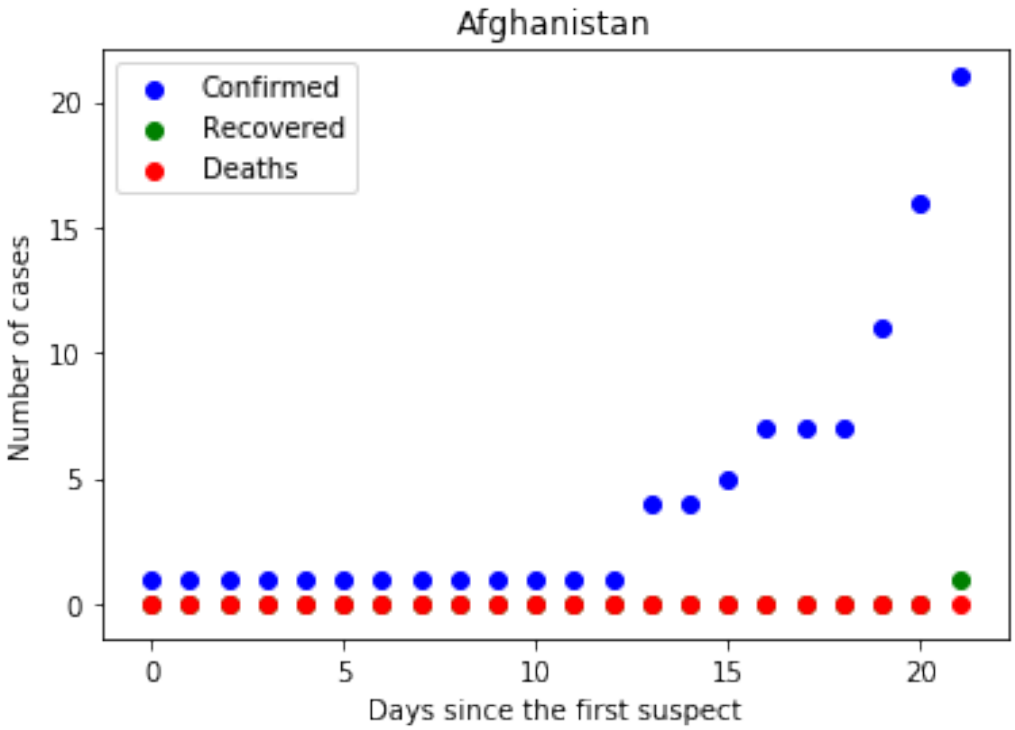
```
countries = df3['Country'].unique()
len(countries)
```

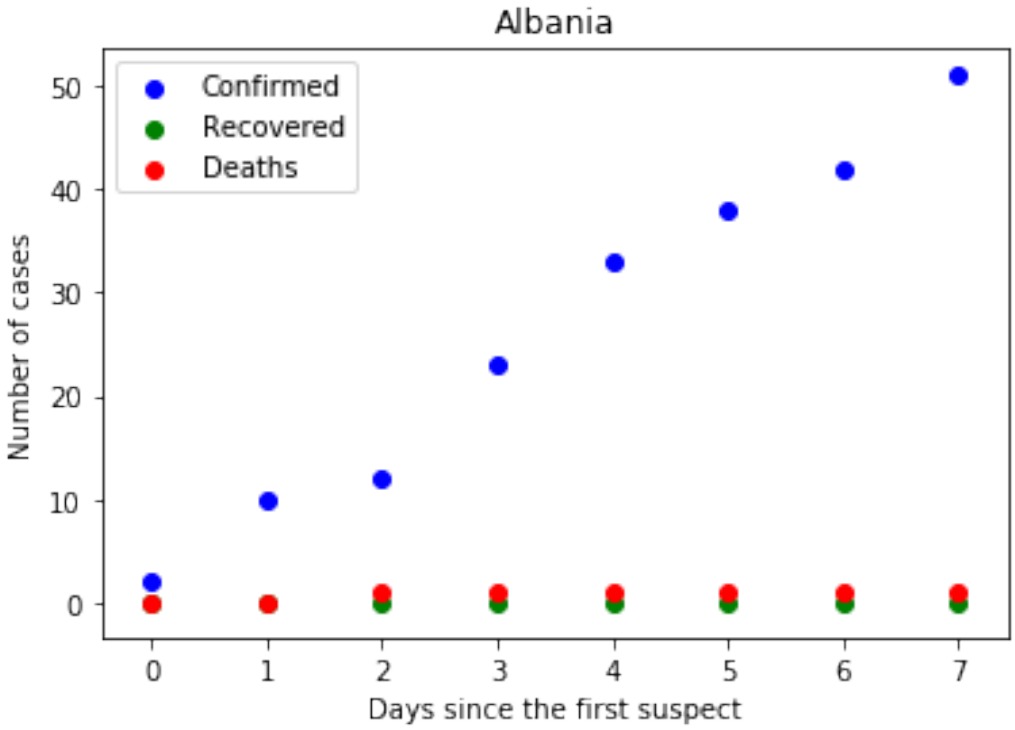
```
171
```

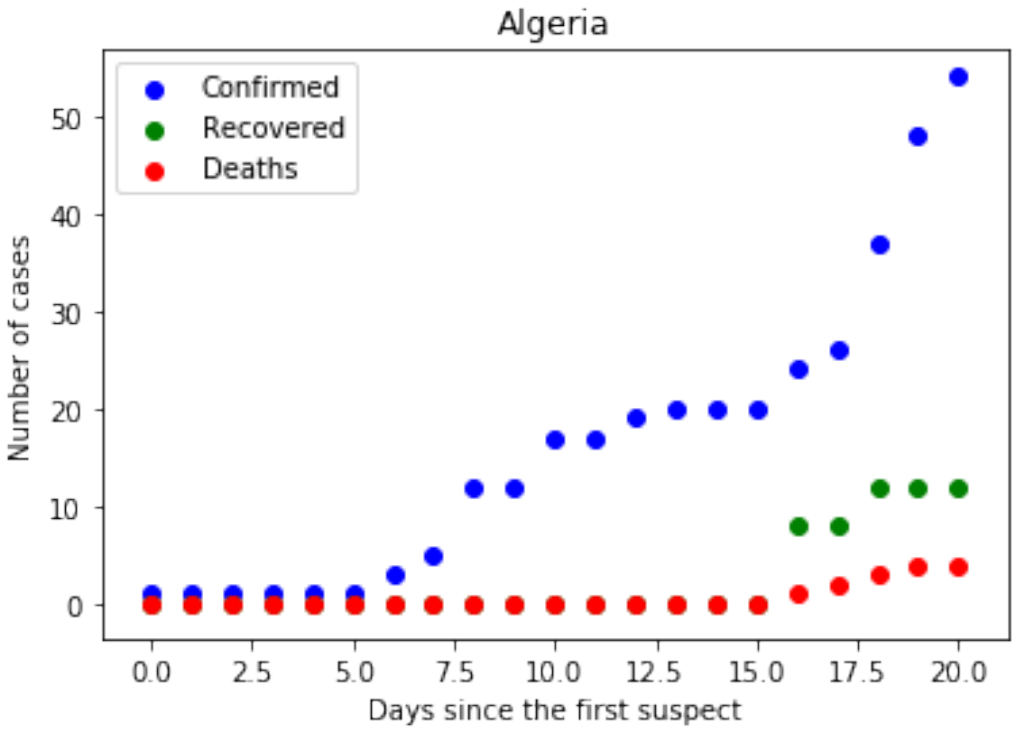
```
for idx in range(0,len(countries)):
    C = df3[df3['Country']==countries[idx]].reset_index()

plt.scatter(np.arange(0,len(C)),C['Confirmed'],color='blue',label='Con
firmed')

plt.scatter(np.arange(0,len(C)),C['Recovered'],color='green',label='Re
covered')

plt.scatter(np.arange(0,len(C)),C['Deaths'],color='red',label='Deaths'
)
    plt.title(countries[idx])
    plt.xlabel('Days since the first suspect')
    plt.ylabel('Number of cases')
    plt.legend()
    plt.show()
```

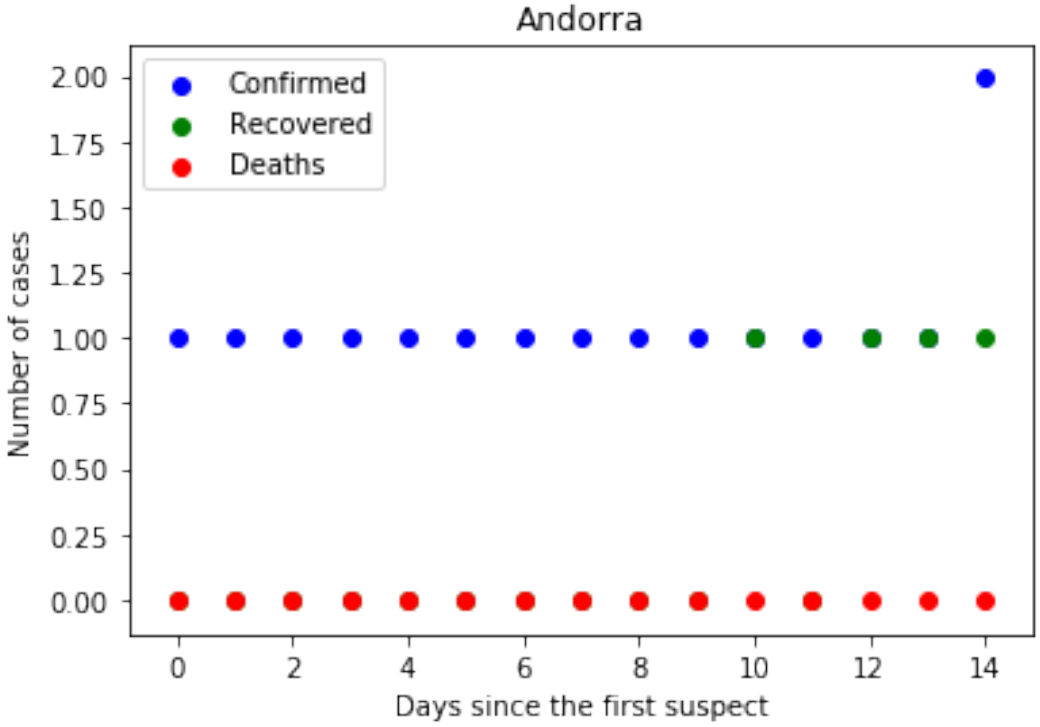

Azerbaijan
Confirmed
Recovered
Deaths
Number of cases
1.0
0.8
0.6
0.4
0.2
0.0
−0.0075
−0.0050
−0.0025
0.0000
0.0025
0.0050
0.0075
Days since the first suspect

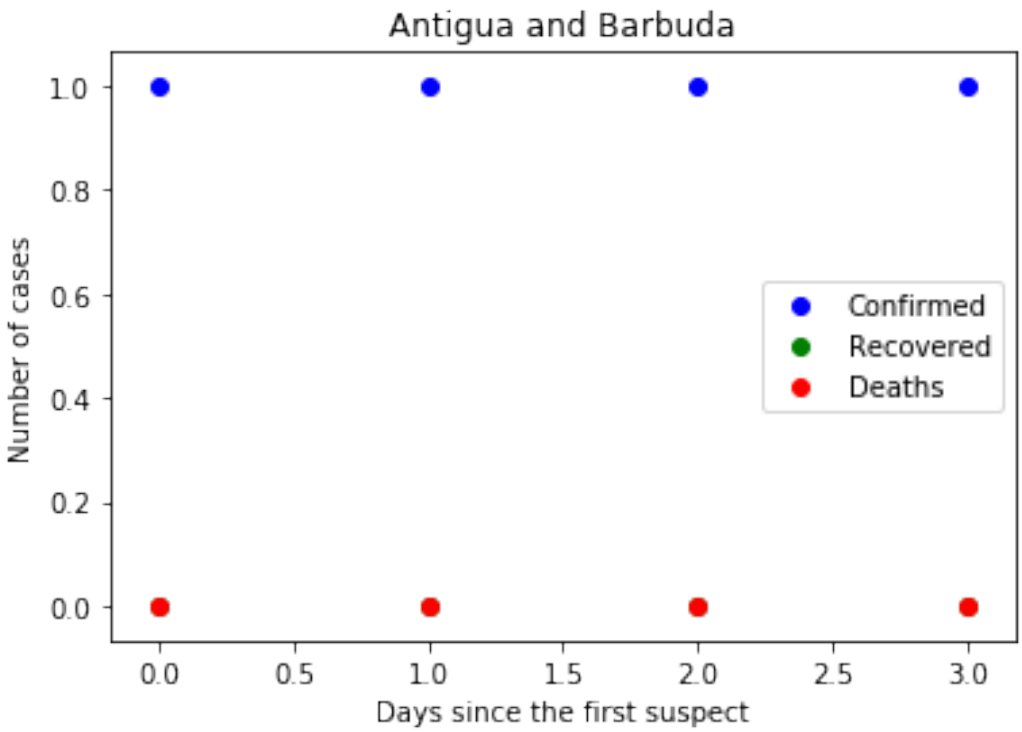

('St. Martin',)
Confirmed
Recovered
Deaths
Number of cases
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0.00
−0.0075
−0.0050
−0.0025
0.0000
0.0025
0.0050
0.0075
Days since the first suspect

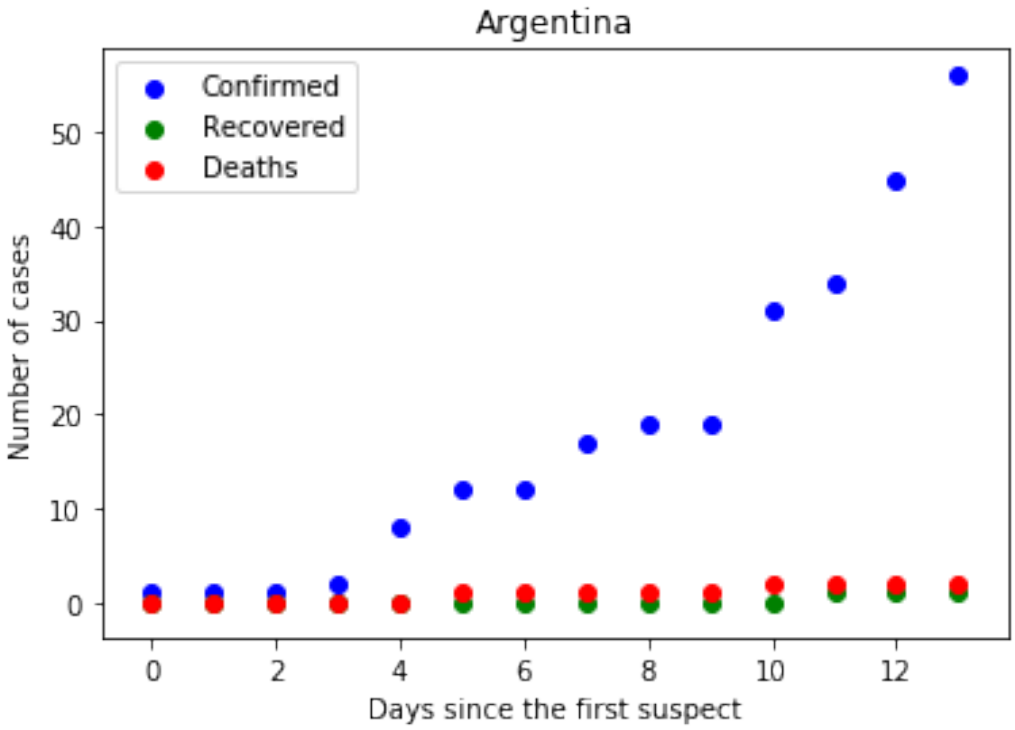

Afghanistan
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
5
10
15
20

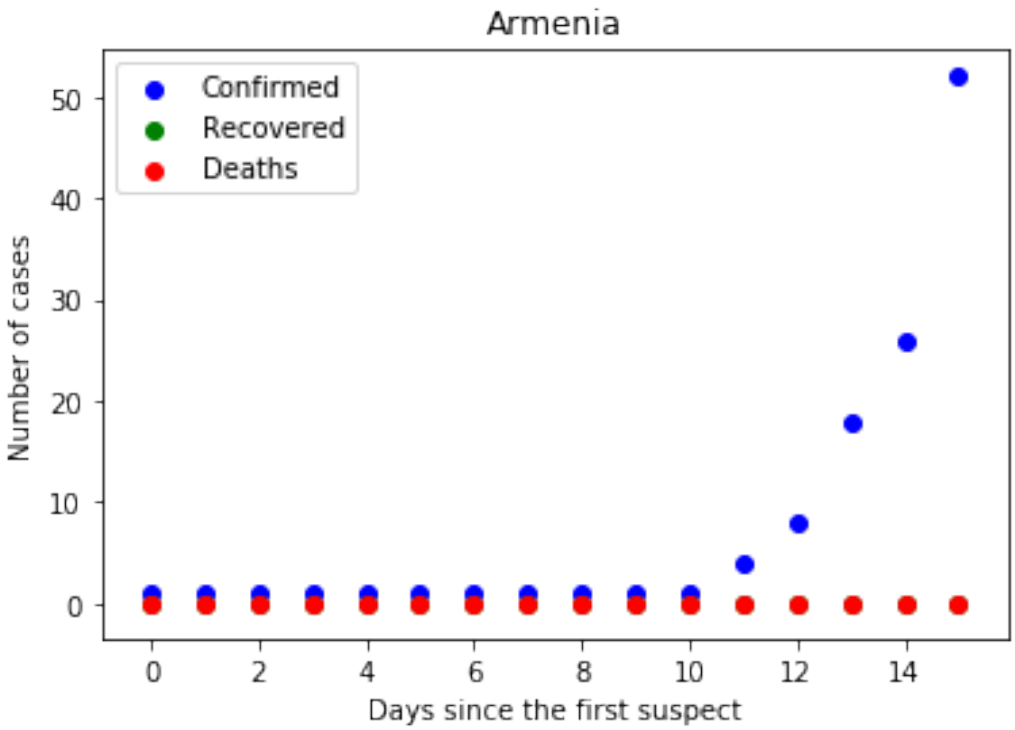

Albania
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
10
20
30
40
50
0
1
2
3
4
5
6
7

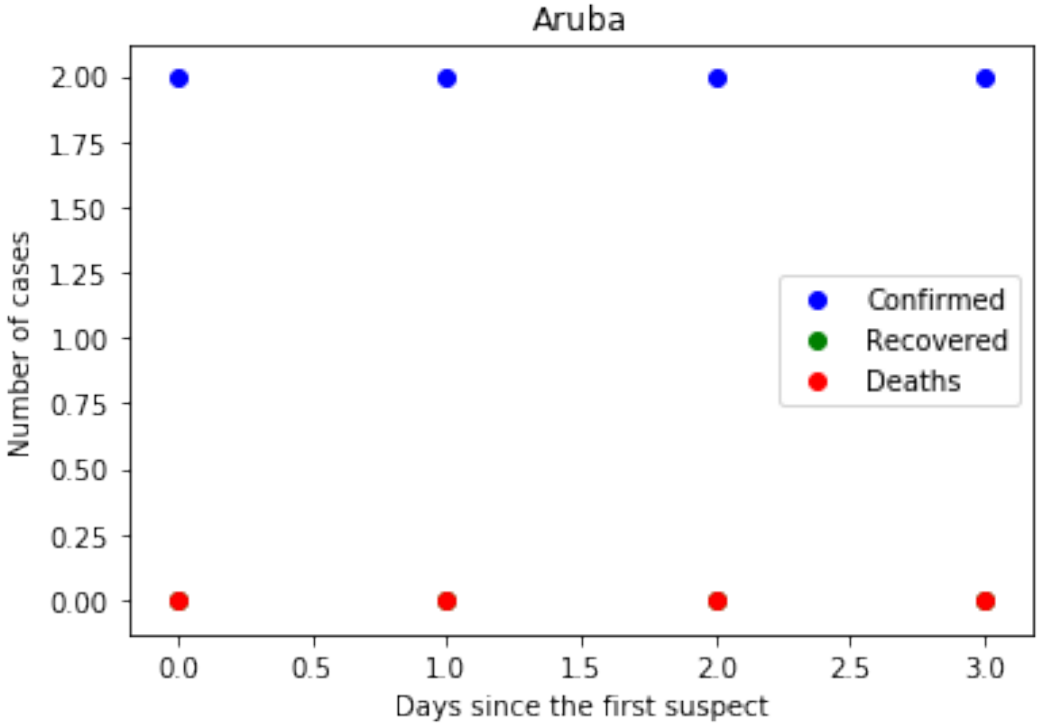

Algeria
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
10
20
30
40
50
0.0
2.5
5.0
7.5
10.0
12.5
15.0
17.5
20.0

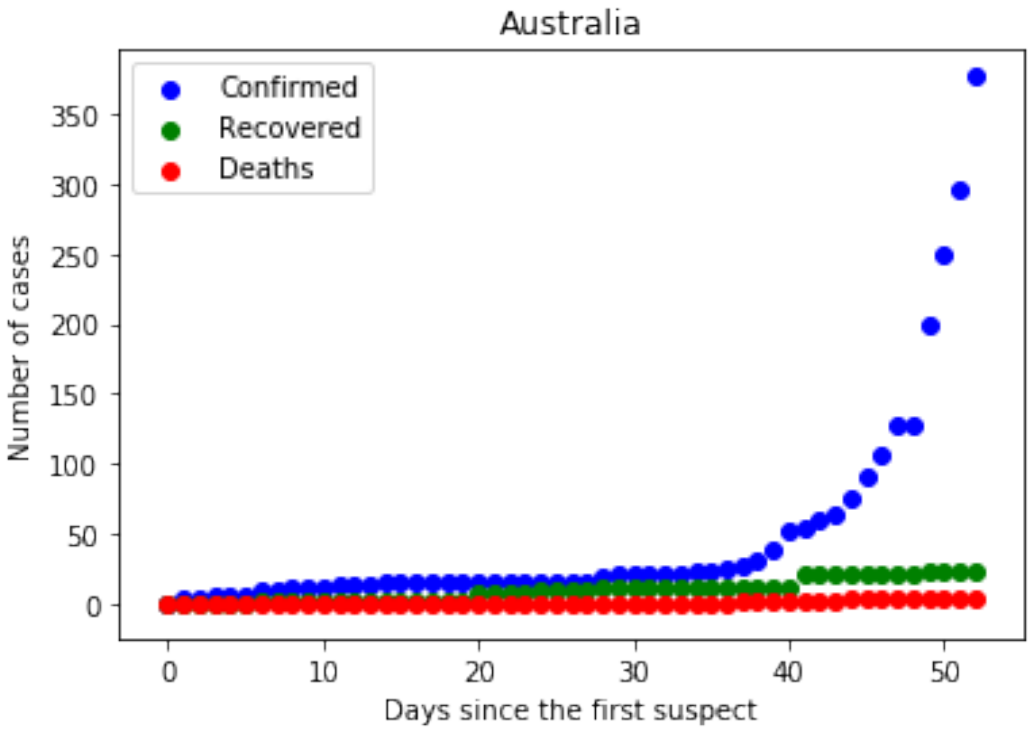

Andorra
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
2.00
0
2
4
6
8
10
12
14

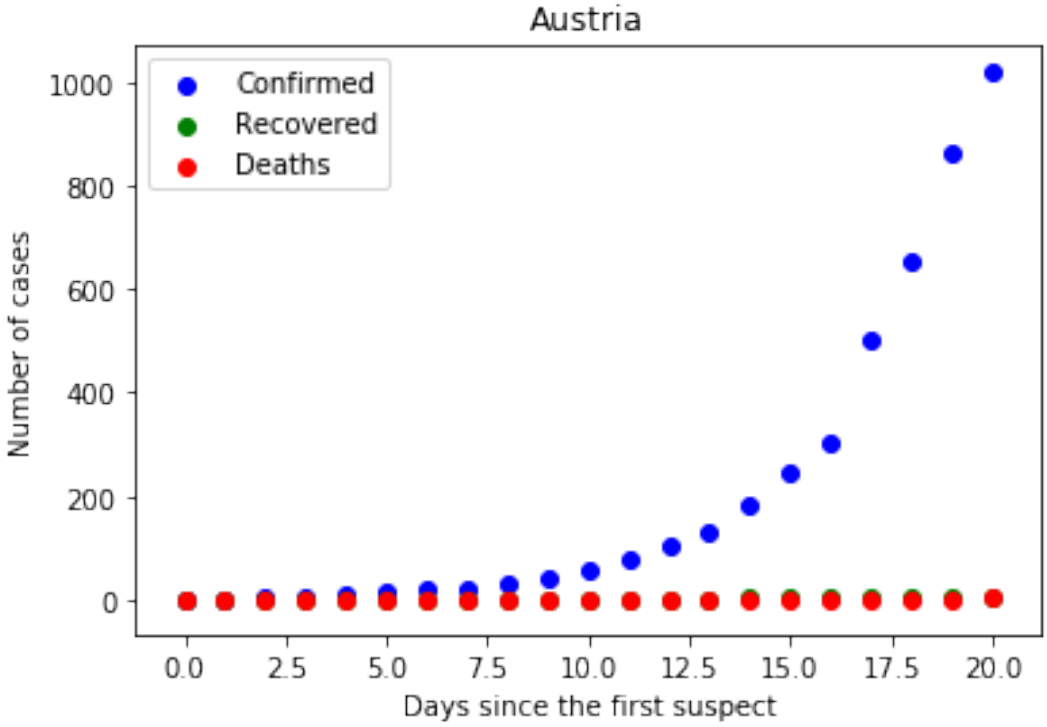

Antigua and Barbuda
Number of cases
Days since the first suspect
Confirmed
Recovered
Deaths
1.0
0.8
0.6
0.4
0.2
0.0
0.0
0.5
1.0
1.5
2.0
2.5
3.0

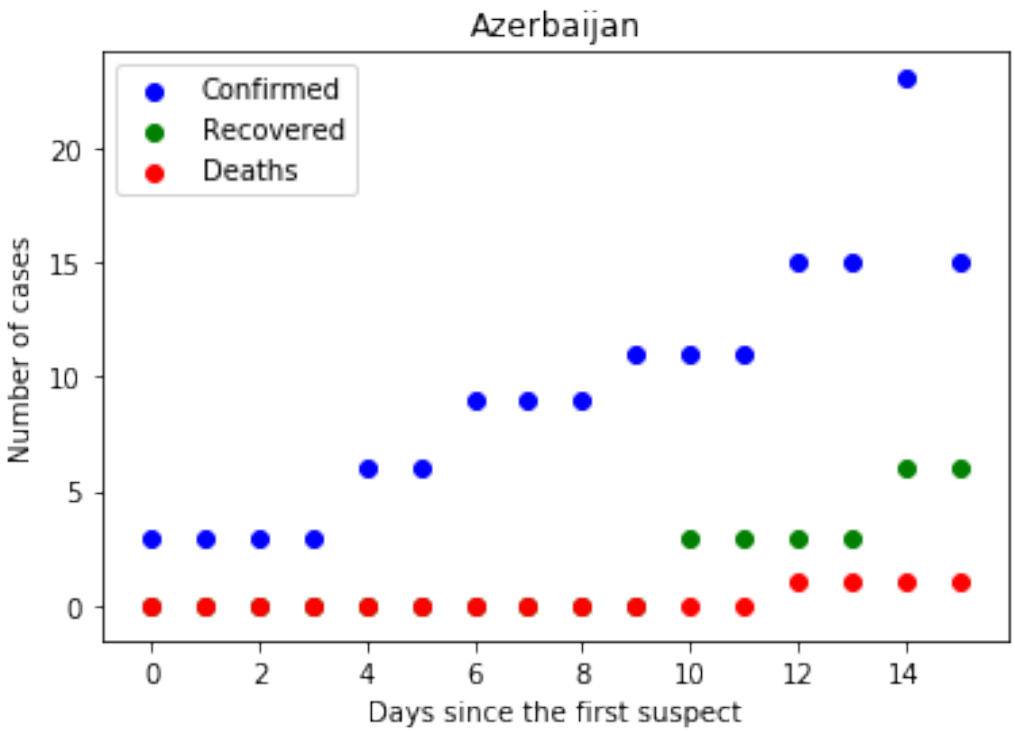

Argentina
Number of cases
Days since the first suspect
Confirmed
Recovered
Deaths
50
40
30
20
10
0
0
2
4
6
8
10
12

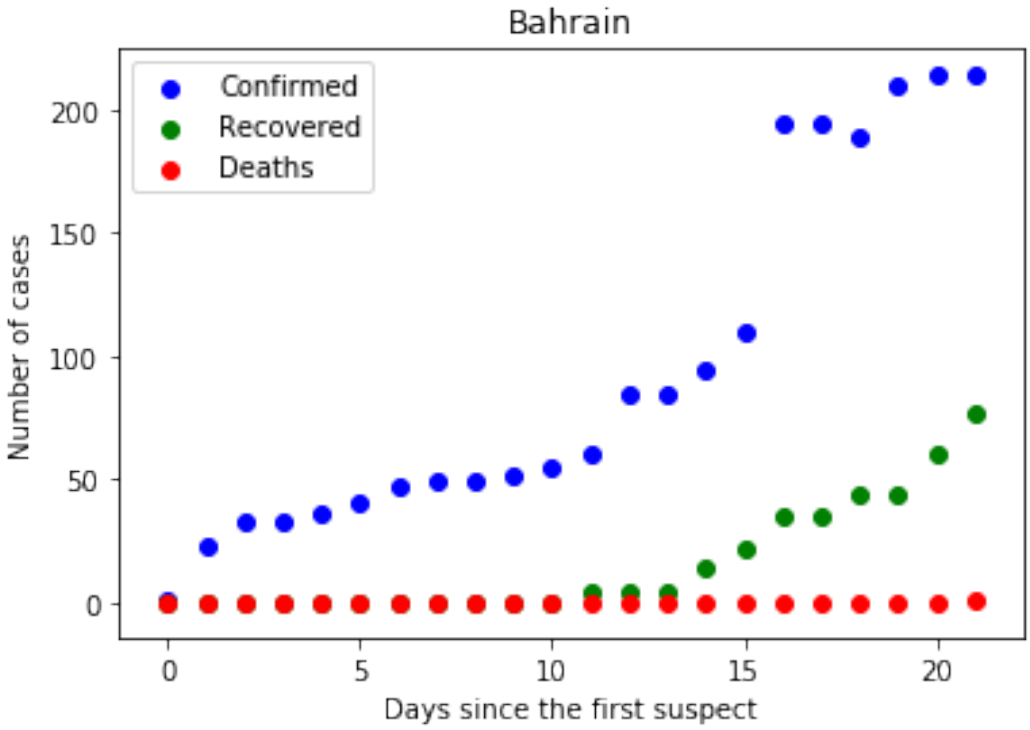

Armenia
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
10
20
30
40
50
0
2
4
6
8
10
12
14

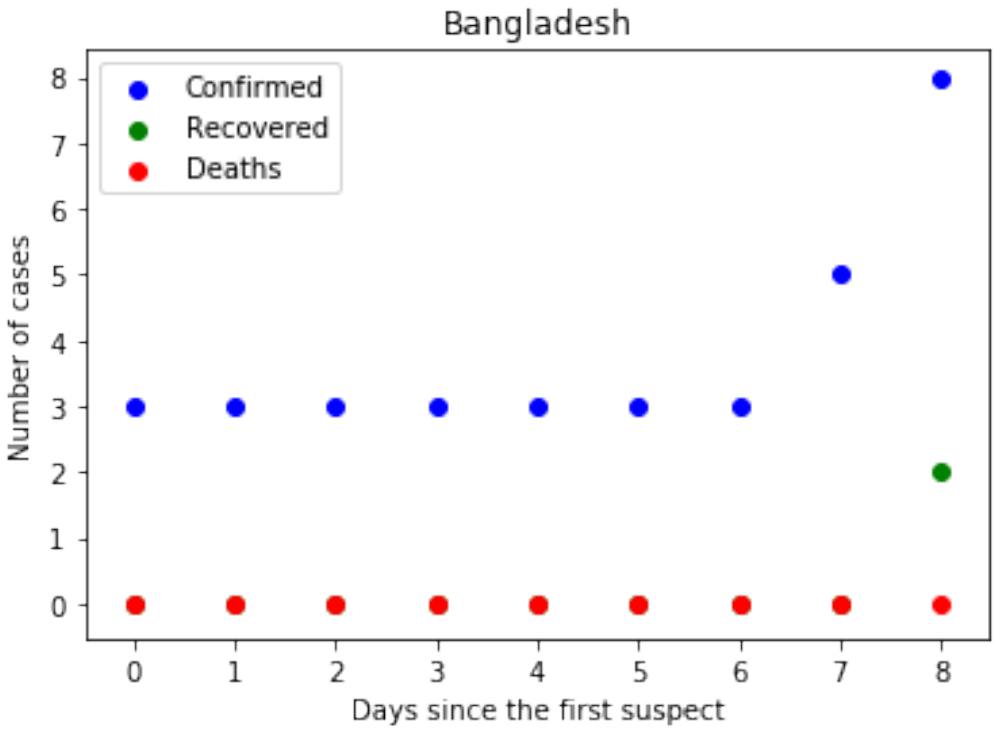

Aruba
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
2.00
0.0
0.5
1.0
1.5
2.0
2.5
3.0

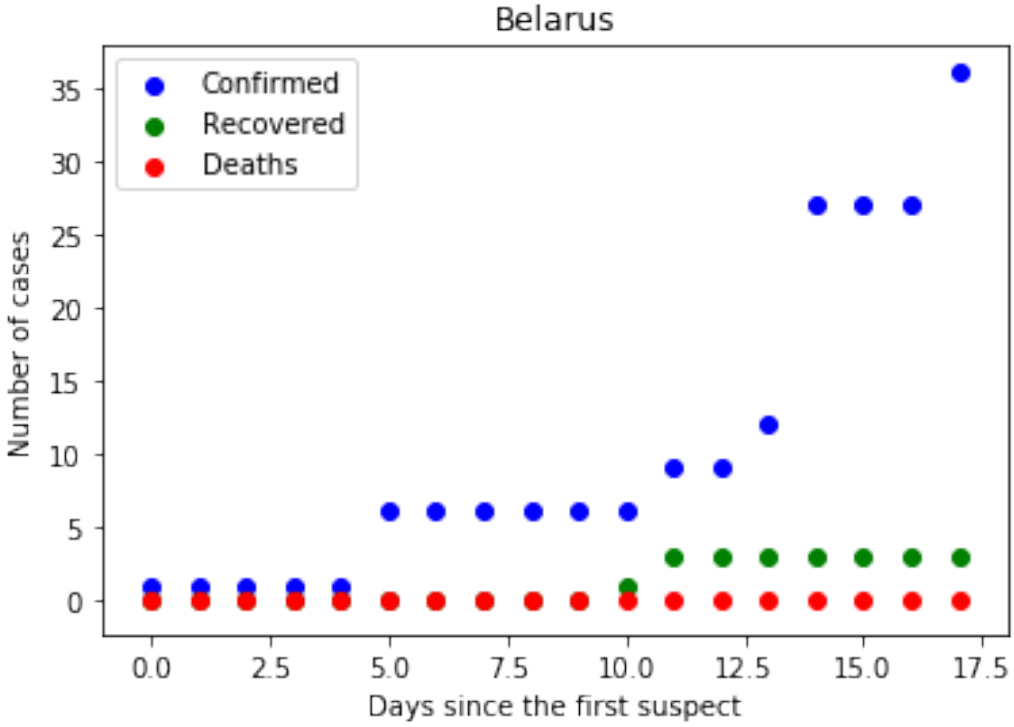

Australia
Confirmed
Recovered
Deaths
Number of cases
0
50
100
150
200
250
300
350
0
10
20
30
40
50
Days since the first suspect

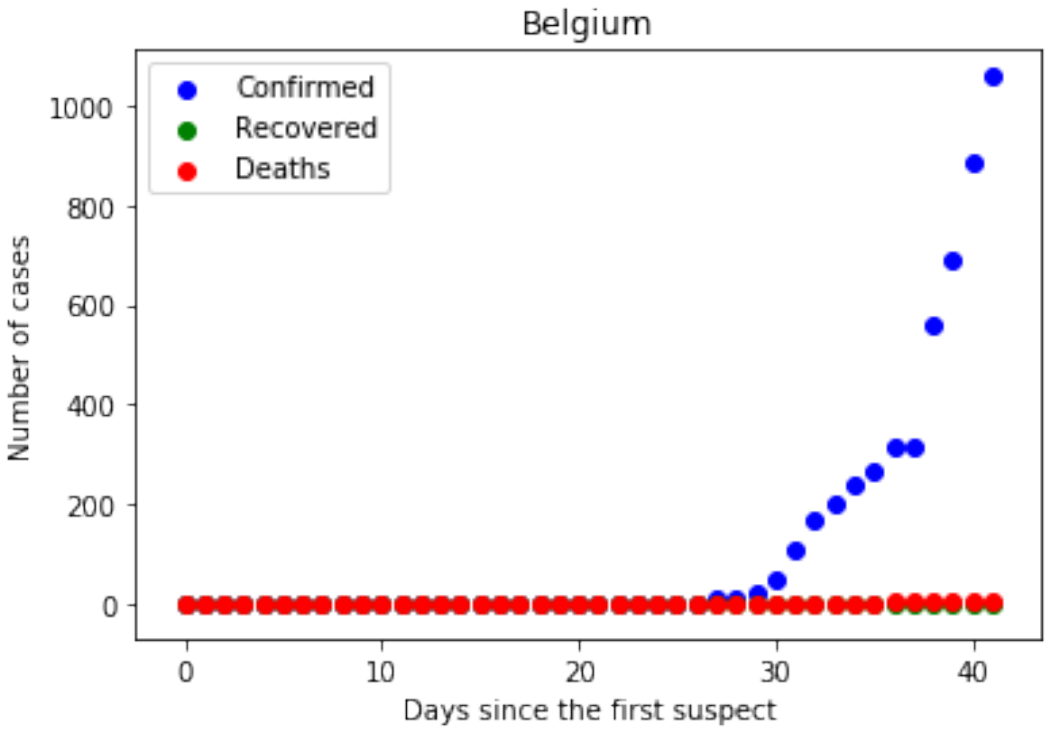

Austria
Confirmed
Recovered
Deaths
Number of cases
0
200
400
600
800
1000
0.0
2.5
5.0
7.5
10.0
12.5
15.0
17.5
20.0
Days since the first suspect

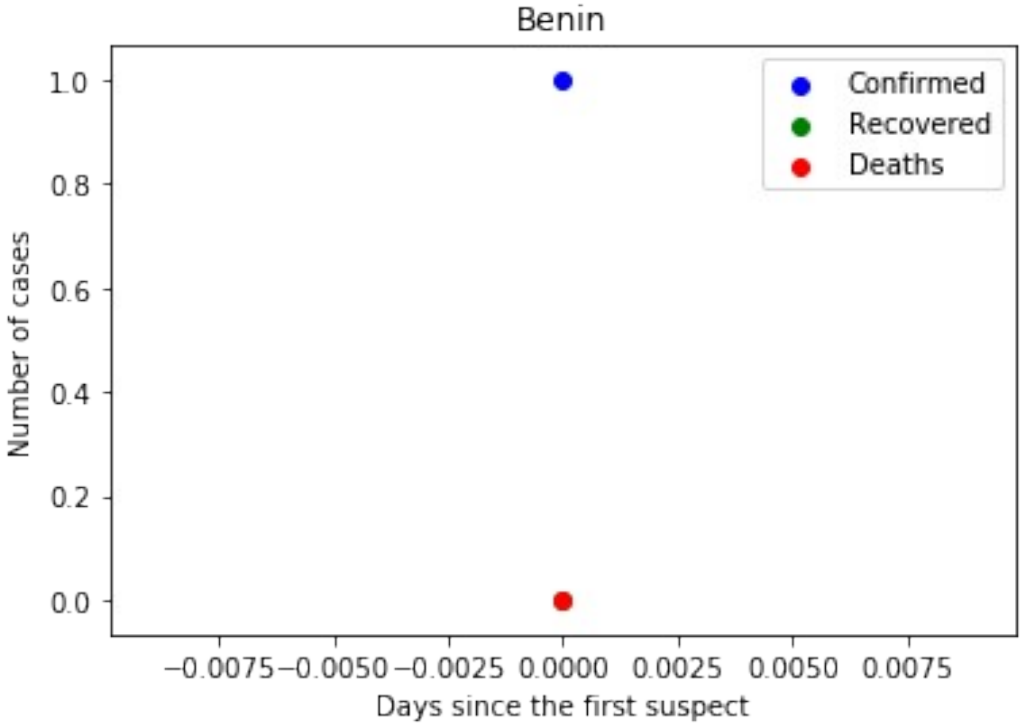

Azerbaijan
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
5
10
15
20
0
2
4
6
8
10
12
14

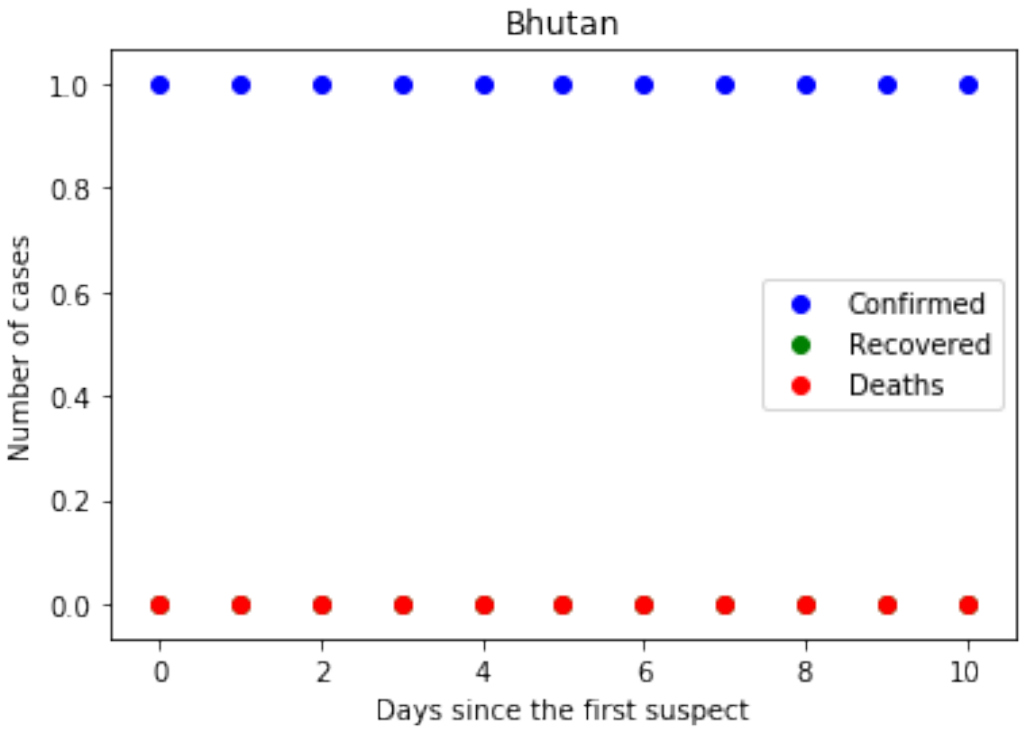

Bahrain
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
50
100
150
200
0
5
10
15
20

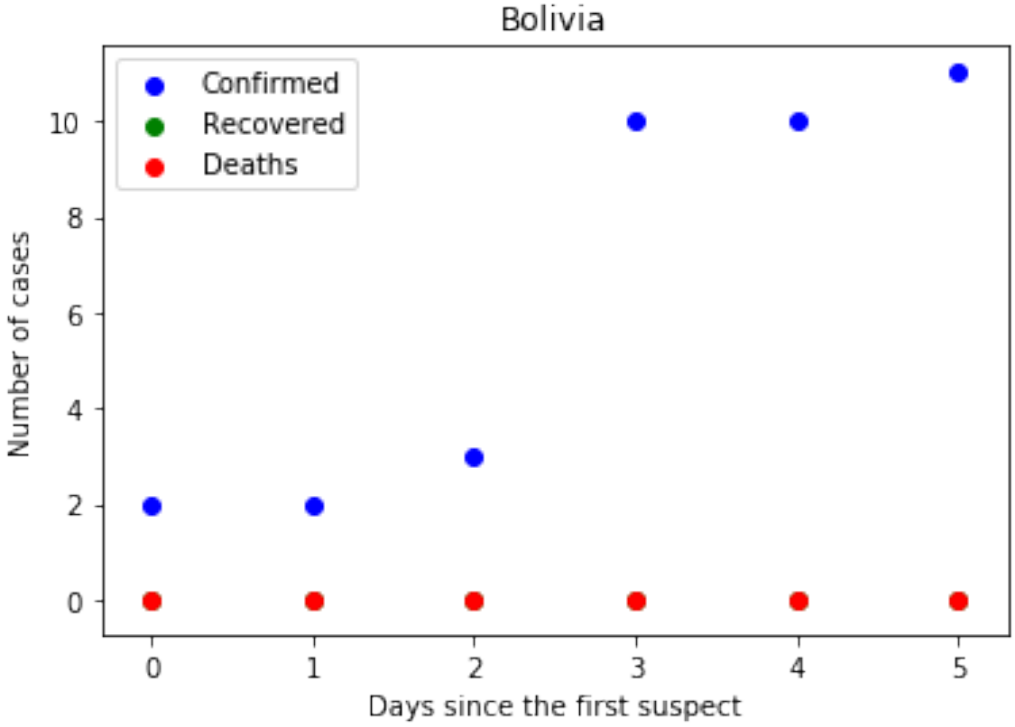

Bangladesh
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
1
2
3
4
5
6
7
8

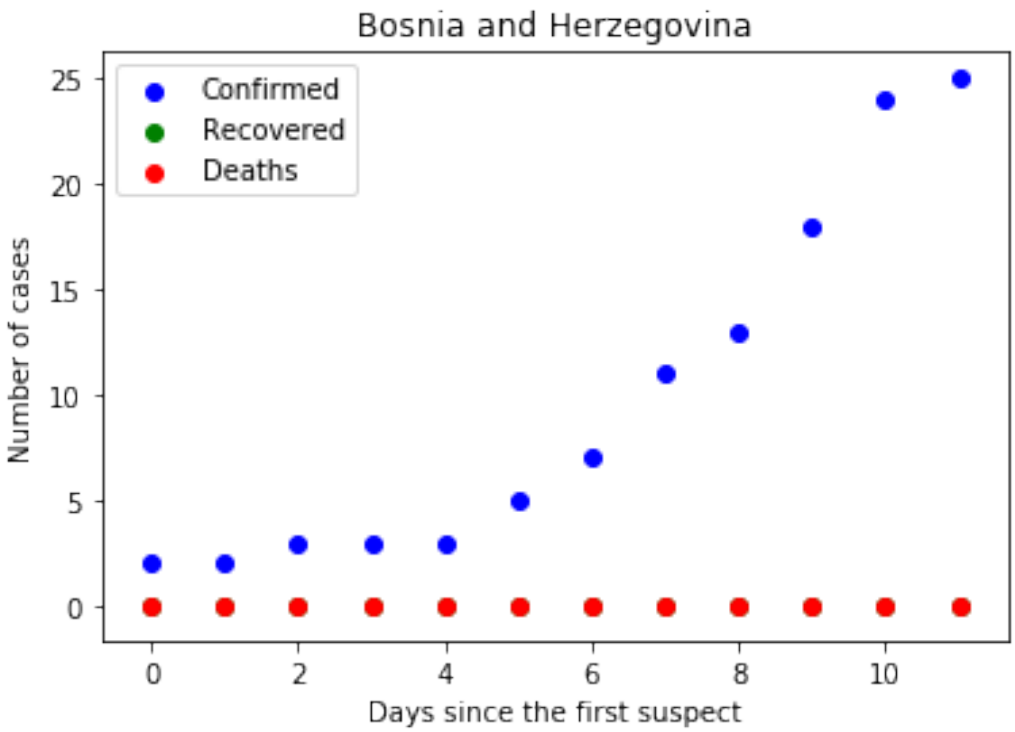

Belarus
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
5
10
15
20
25
30
35
0.0
2.5
5.0
7.5
10.0
12.5
15.0
17.5

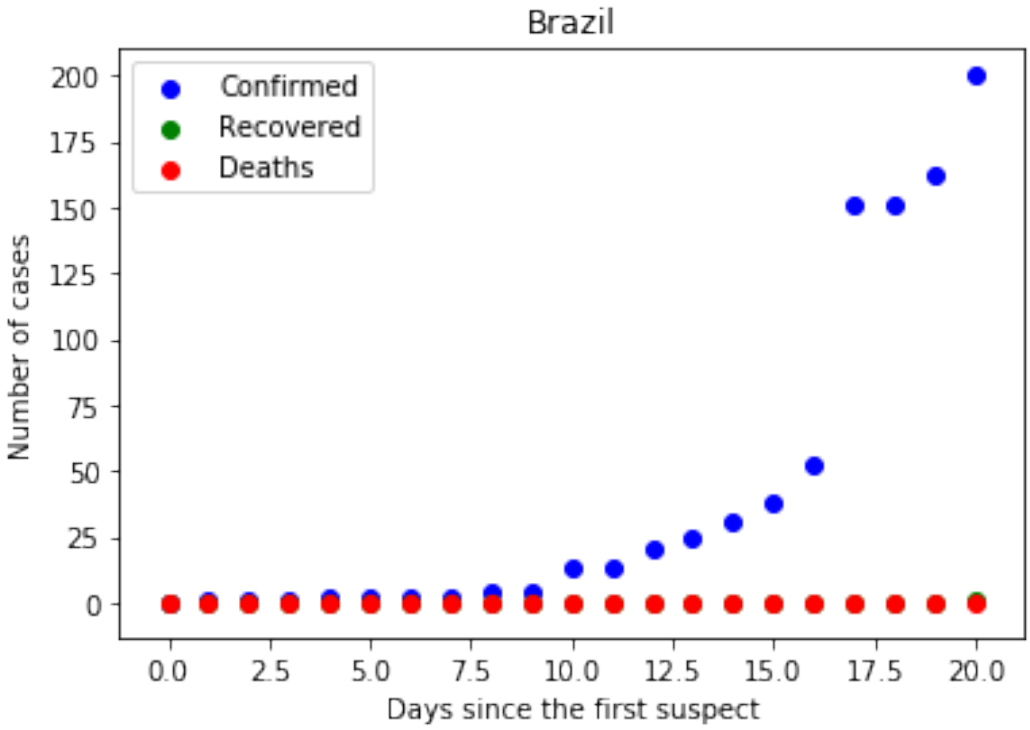

Belgium
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect

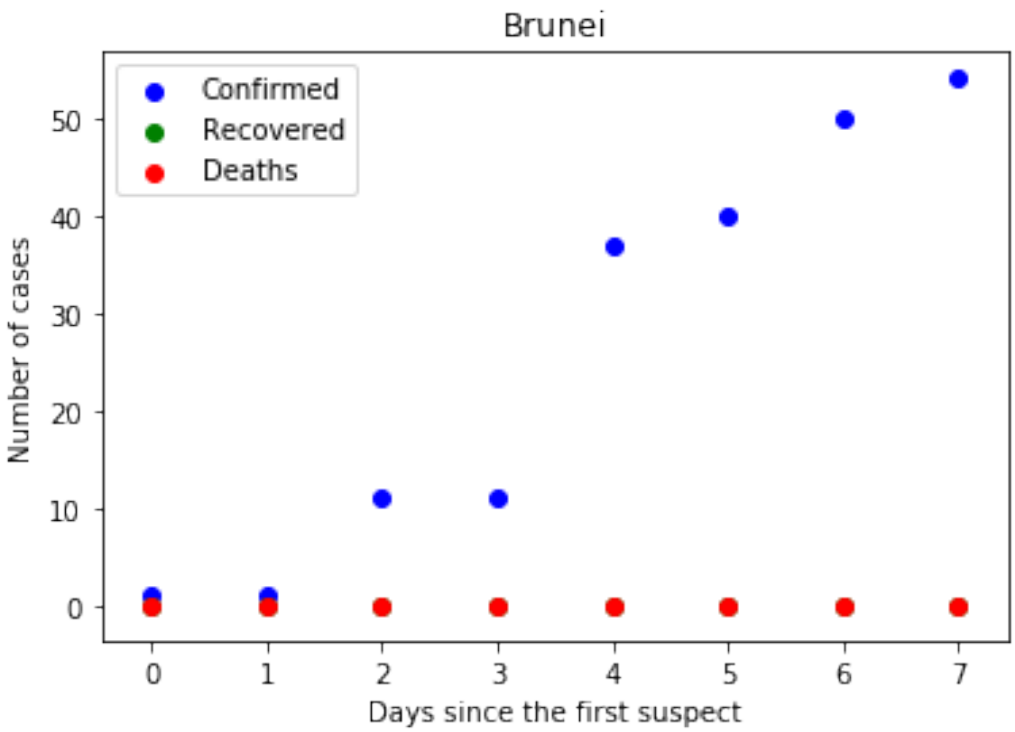

Benin
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect

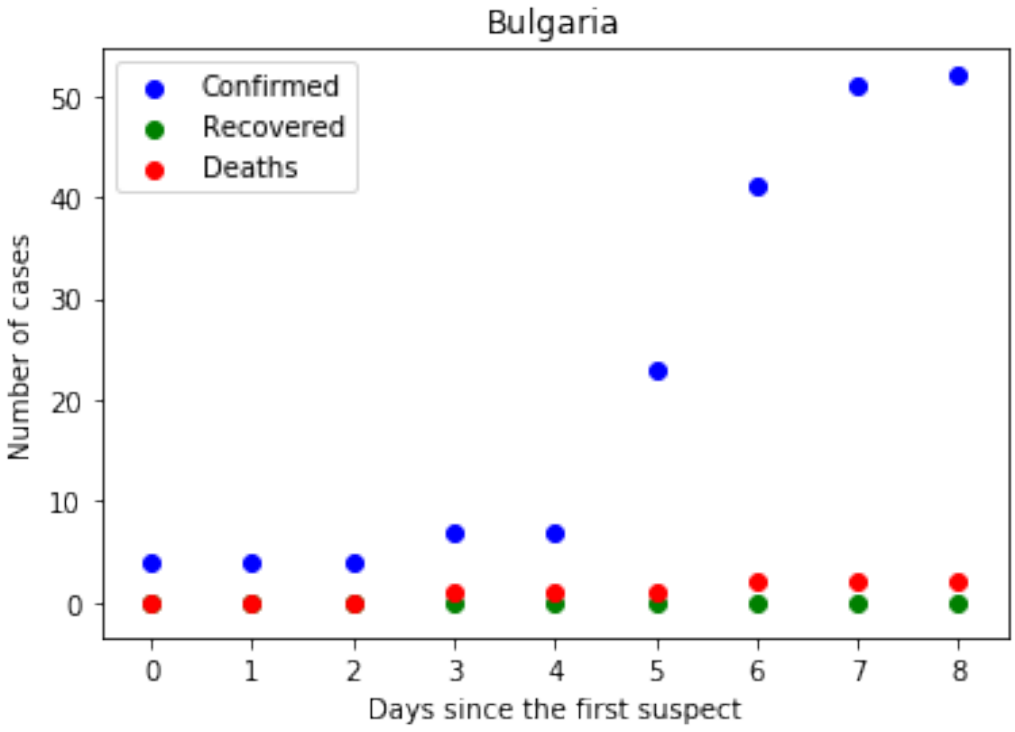

Bhutan
Number of cases
Days since the first suspect
Confirmed
Recovered
Deaths
0.0
0.2
0.4
0.6
0.8
1.0
0
2
4
6
8
10

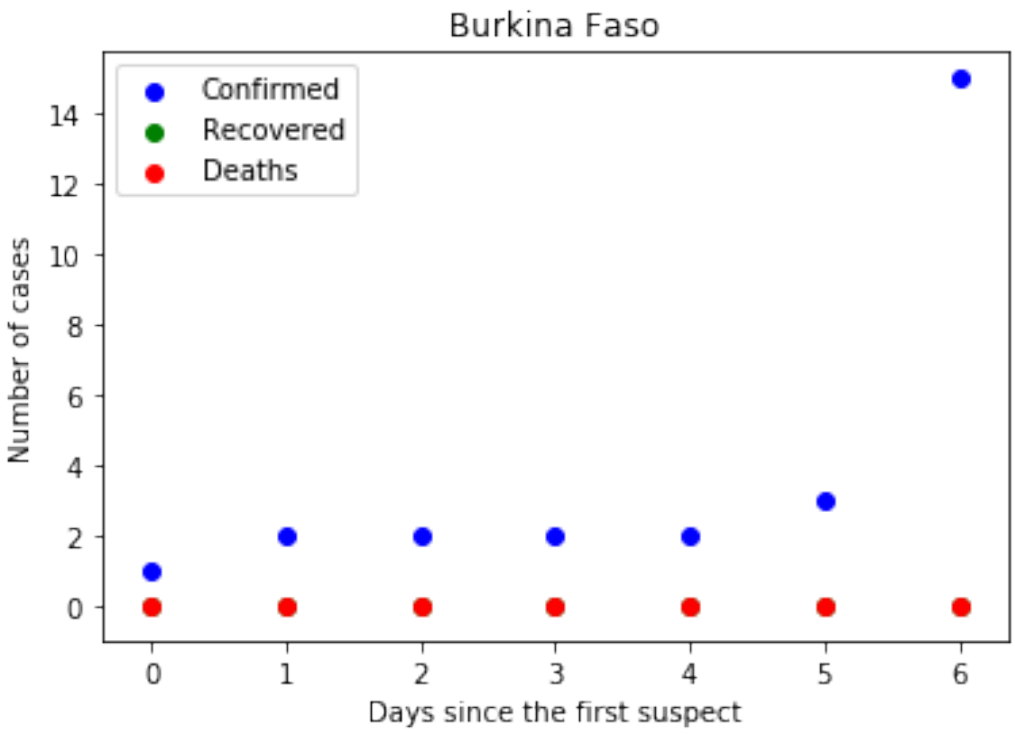

Bolivia
Number of cases
Days since the first suspect
Confirmed
Recovered
Deaths
0
2
4
6
8
10
0
1
2
3
4
5

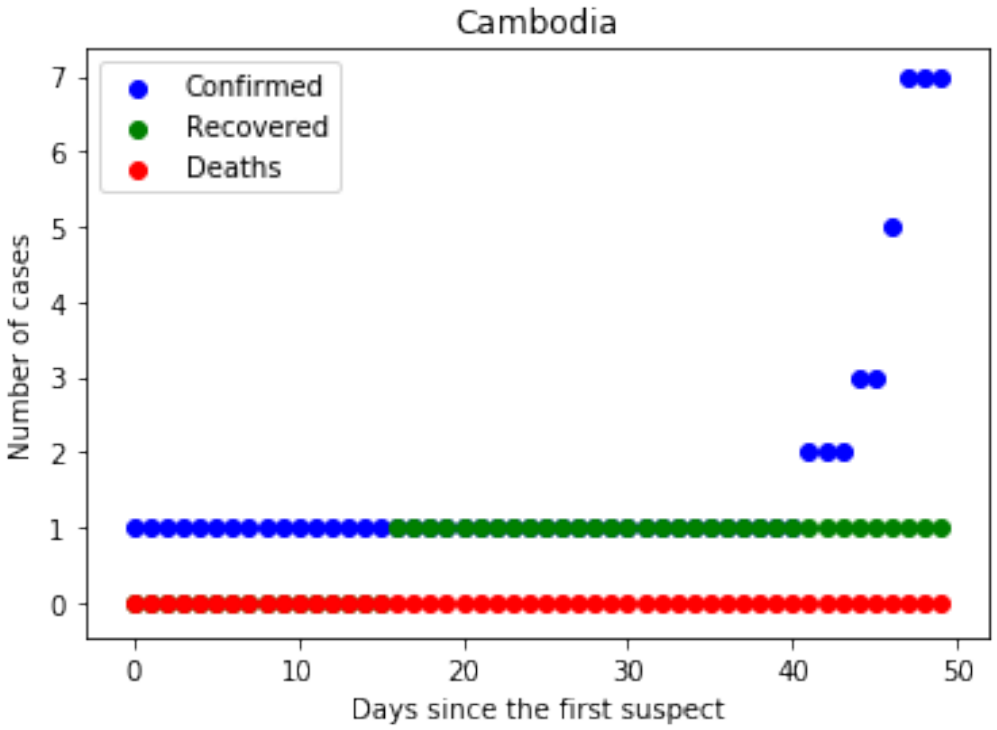

Bosnia and Herzegovina
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
5
10
15
20
25
0
2
4
6
8
10

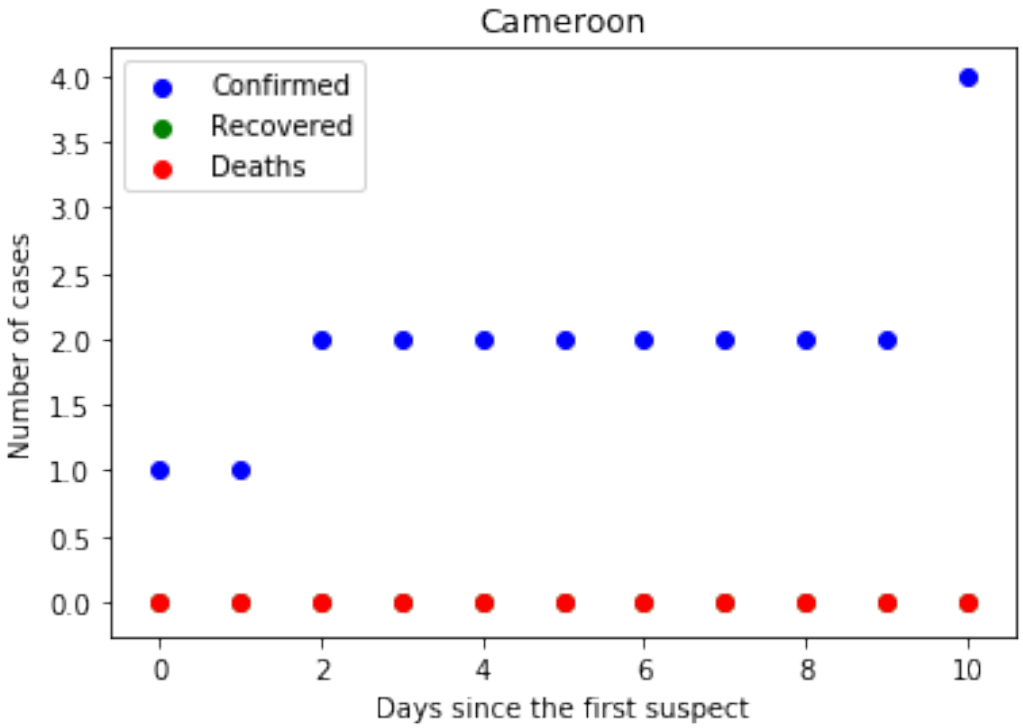

Brazil
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
25
50
75
100
125
150
175
200
0.0
2.5
5.0
7.5
10.0
12.5
15.0
17.5
20.0

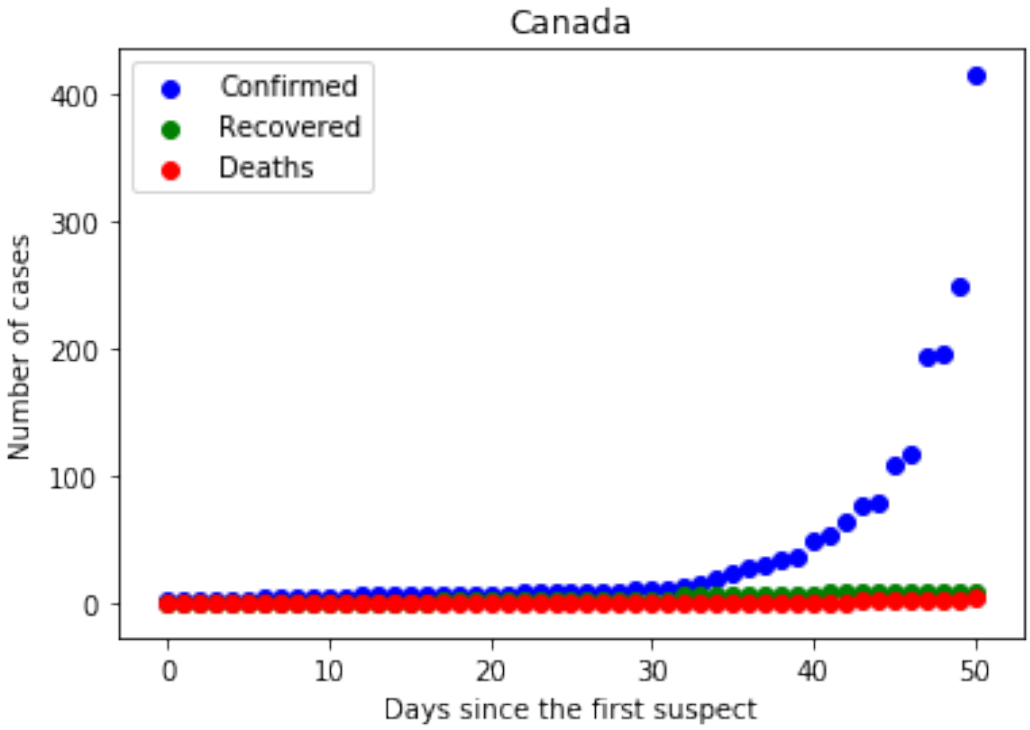

Brunei
Confirmed
Recovered
Deaths
Number of cases
0
10
20
30
40
50
0
1
2
3
4
5
6
7
Days since the first suspect

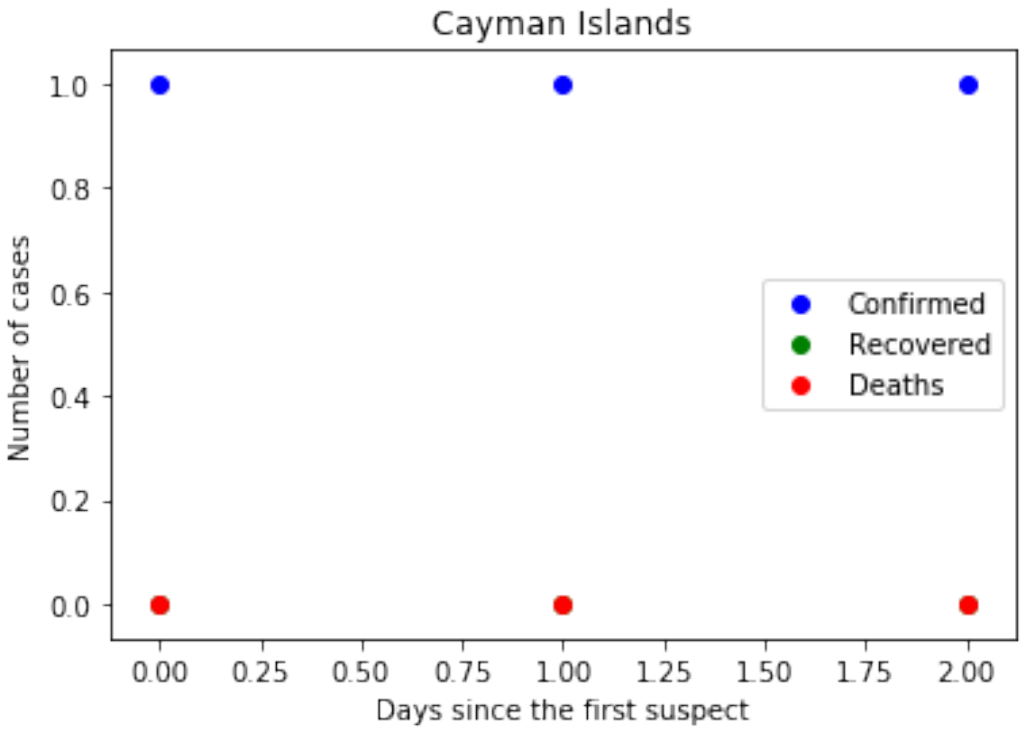

Bulgaria
Confirmed
Recovered
Deaths
Number of cases
0
10
20
30
40
50
0
1
2
3
4
5
6
7
8
Days since the first suspect

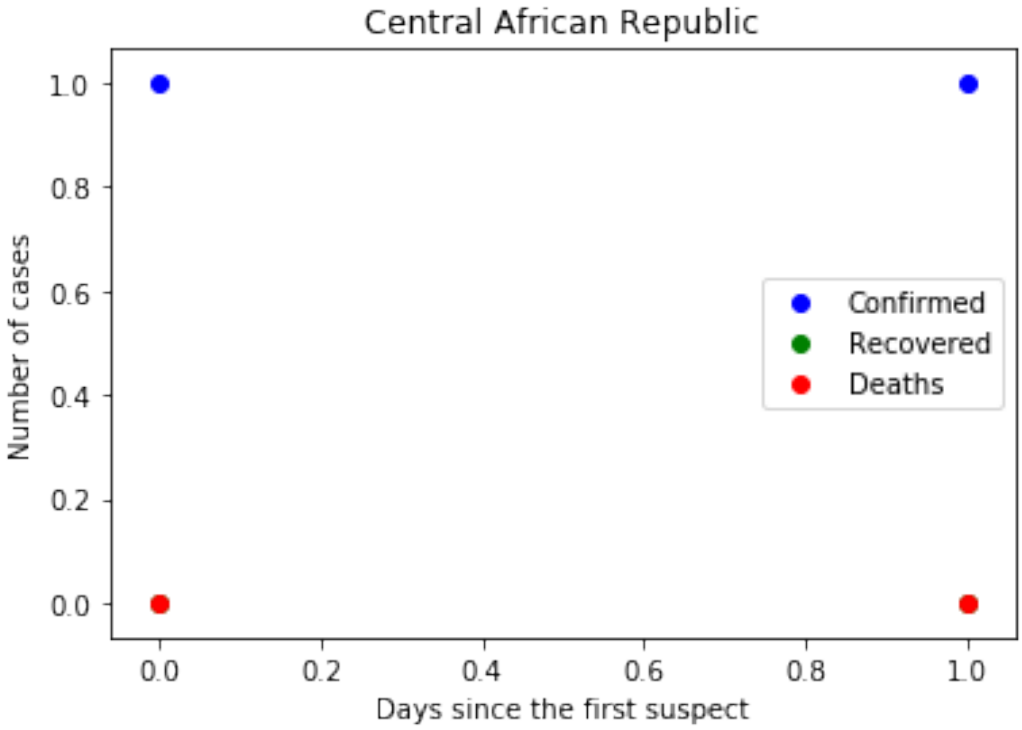

Burkina Faso
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
2
4
6
8
10
12
14
0
1
2
3
4
5
6

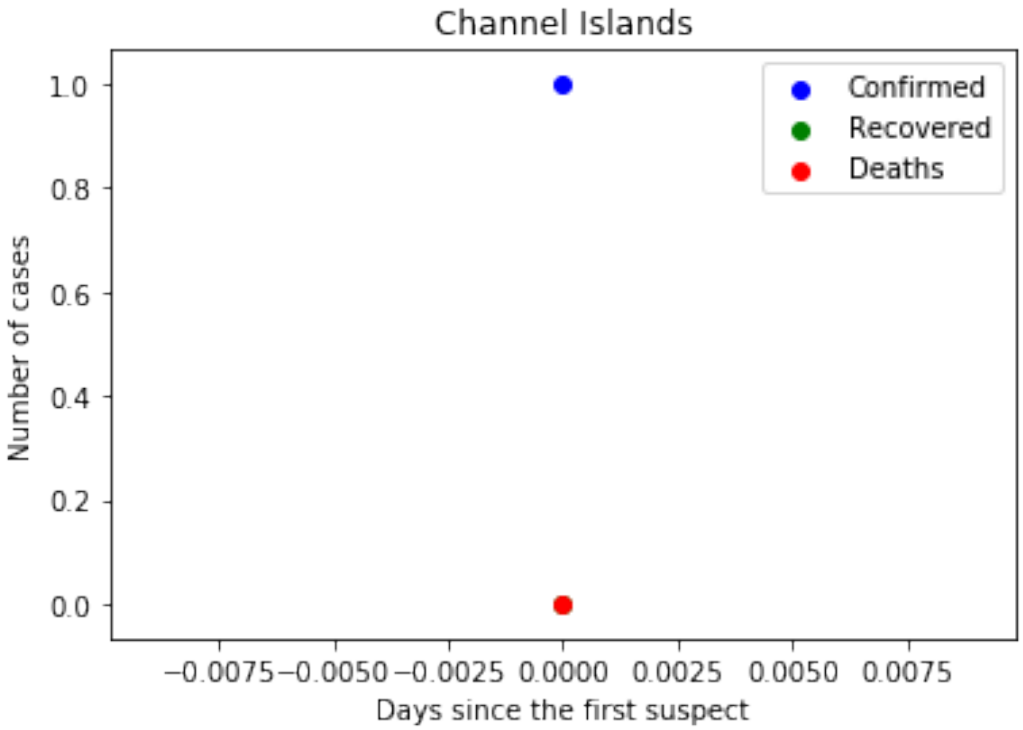

Cambodia
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
1
2
3
4
5
6
7
0
10
20
30
40
50

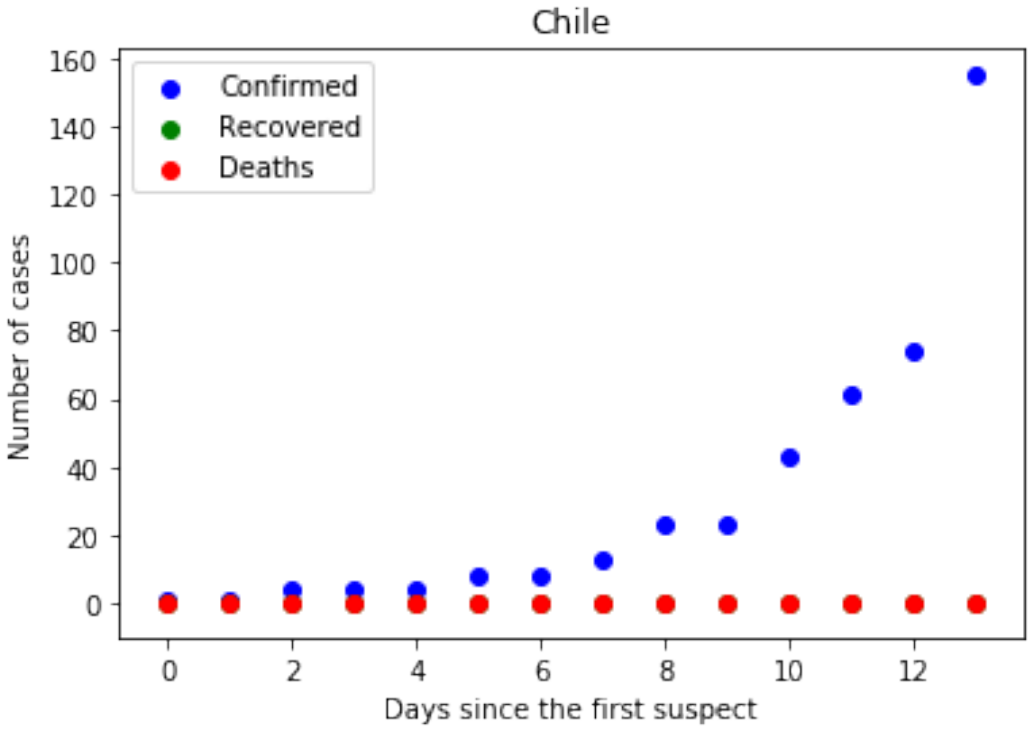

Cameroon
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
0
2
4
6
8
10

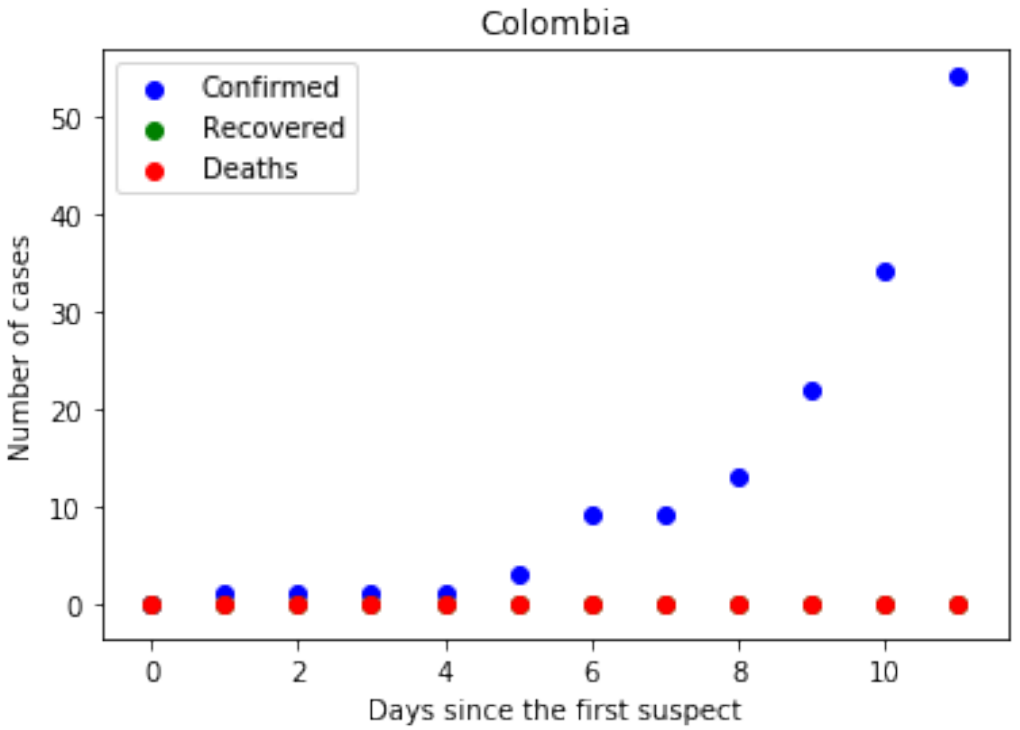

Canada
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
100
200
300
400
0
10
20
30
40
50

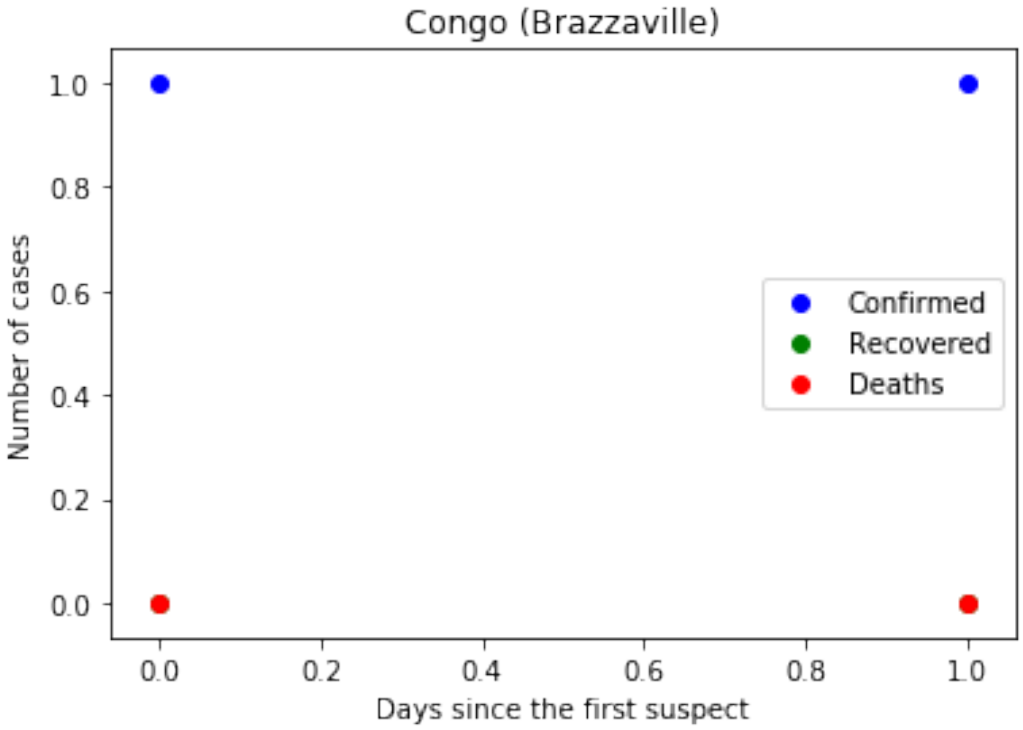

Cayman Islands
Number of cases
Days since the first suspect
Confirmed
Recovered
Deaths
1.0
0.8
0.6
0.4
0.2
0.0
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
2.00

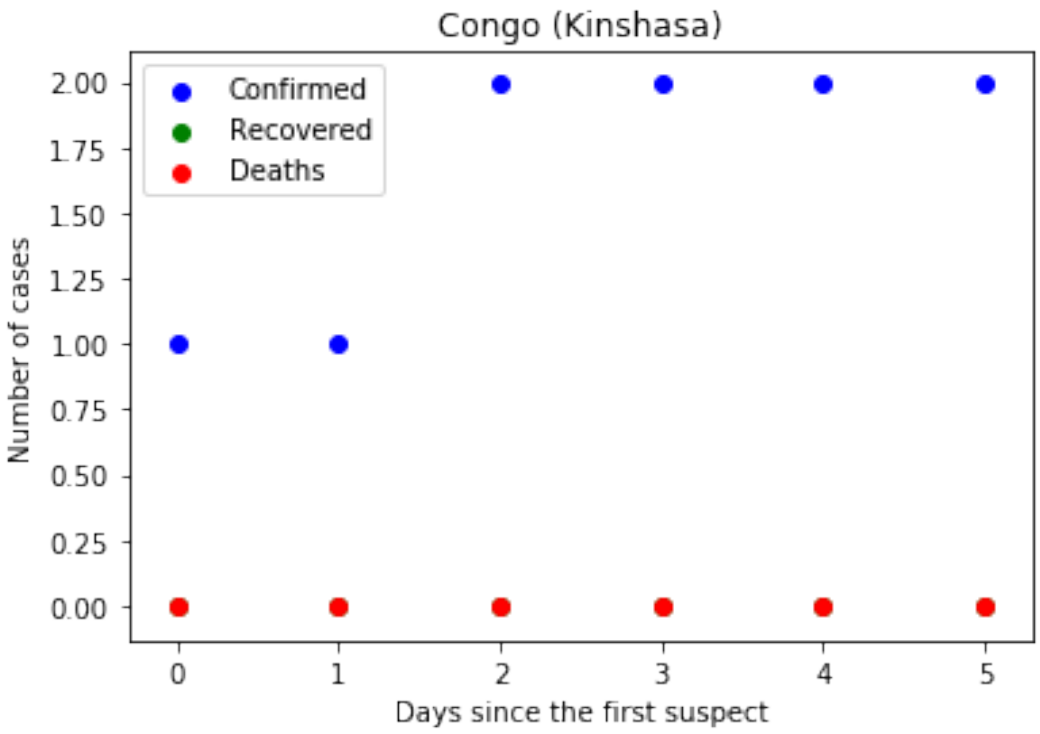

Central African Republic
Number of cases
Days since the first suspect
Confirmed
Recovered
Deaths
1.0
0.8
0.6
0.4
0.2
0.0
0.0
0.2
0.4
0.6
0.8
1.0

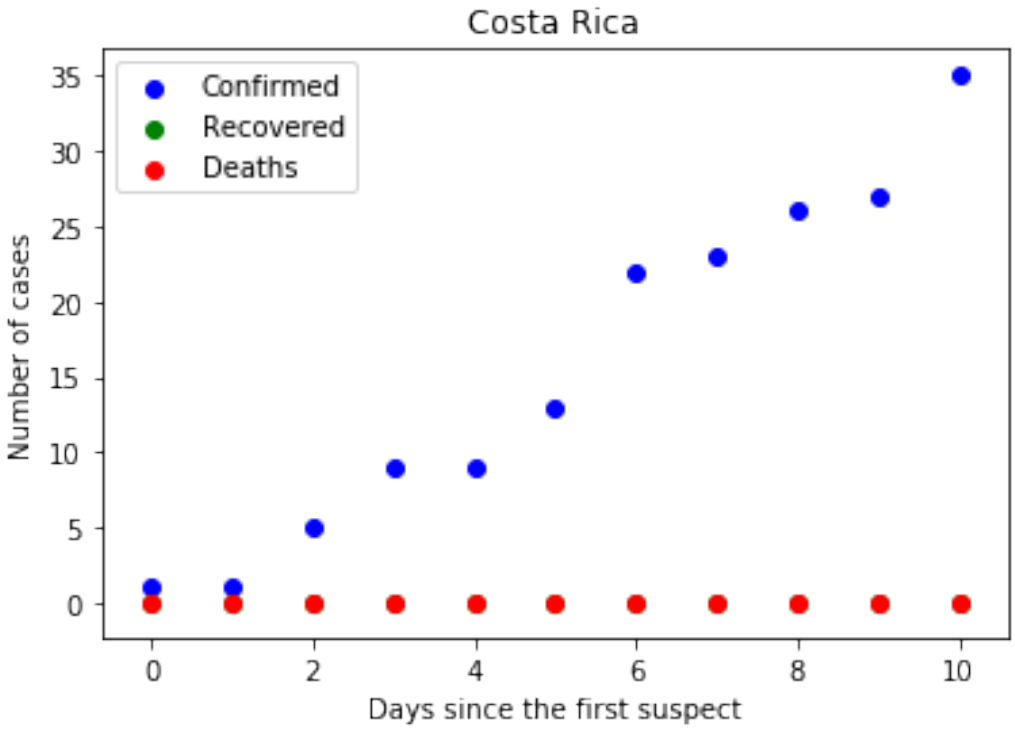

Channel Islands
Confirmed
Recovered
Deaths
Number of cases
1.0
0.8
0.6
0.4
0.2
0.0
−0.0075
−0.0050
−0.0025
0.0000
0.0025
0.0050
0.0075
Days since the first suspect

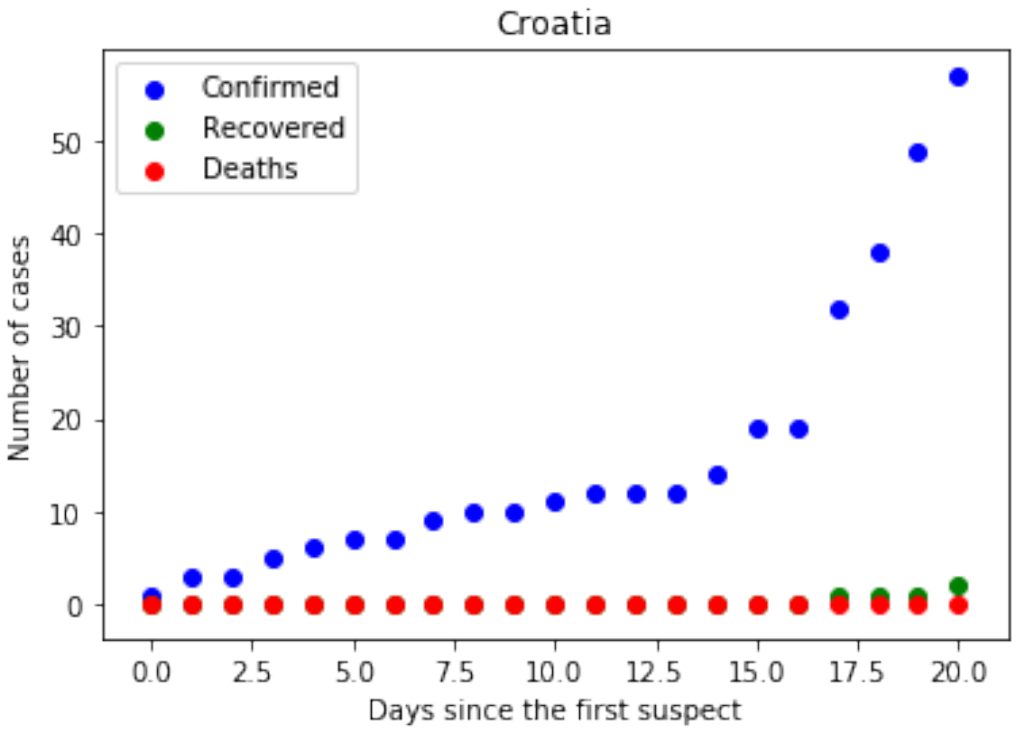

Chile
Confirmed
Recovered
Deaths
Number of cases
160
140
120
100
80
60
40
20
0
0
2
4
6
8
10
12
Days since the first suspect

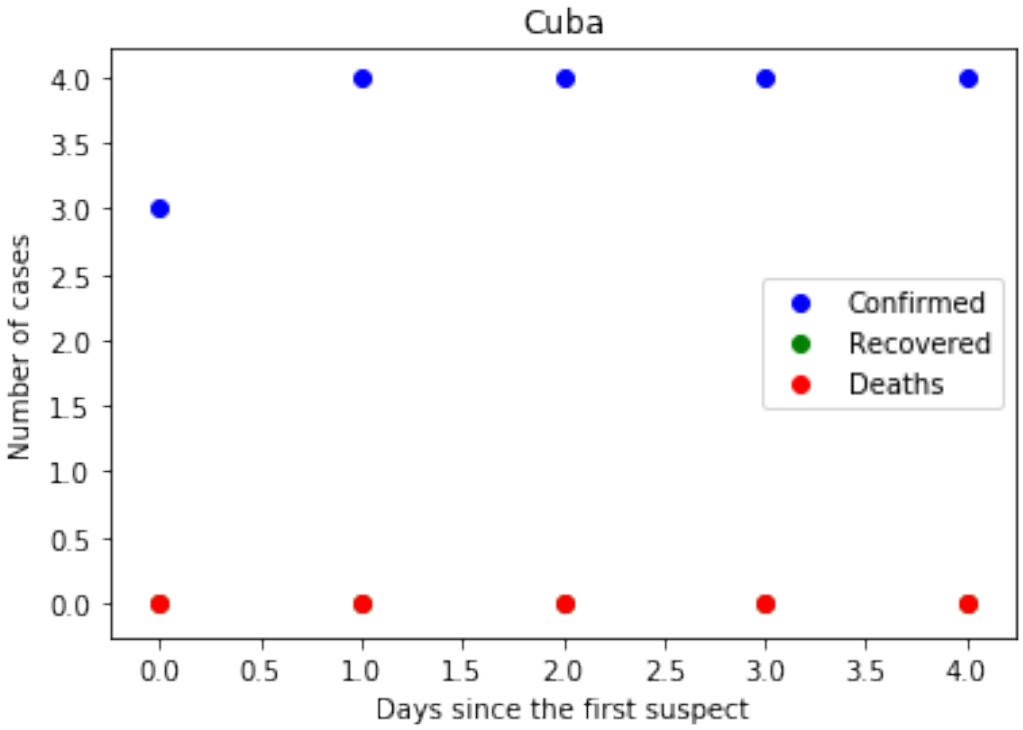

Colombia
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
10
20
30
40
50
0
2
4
6
8
10

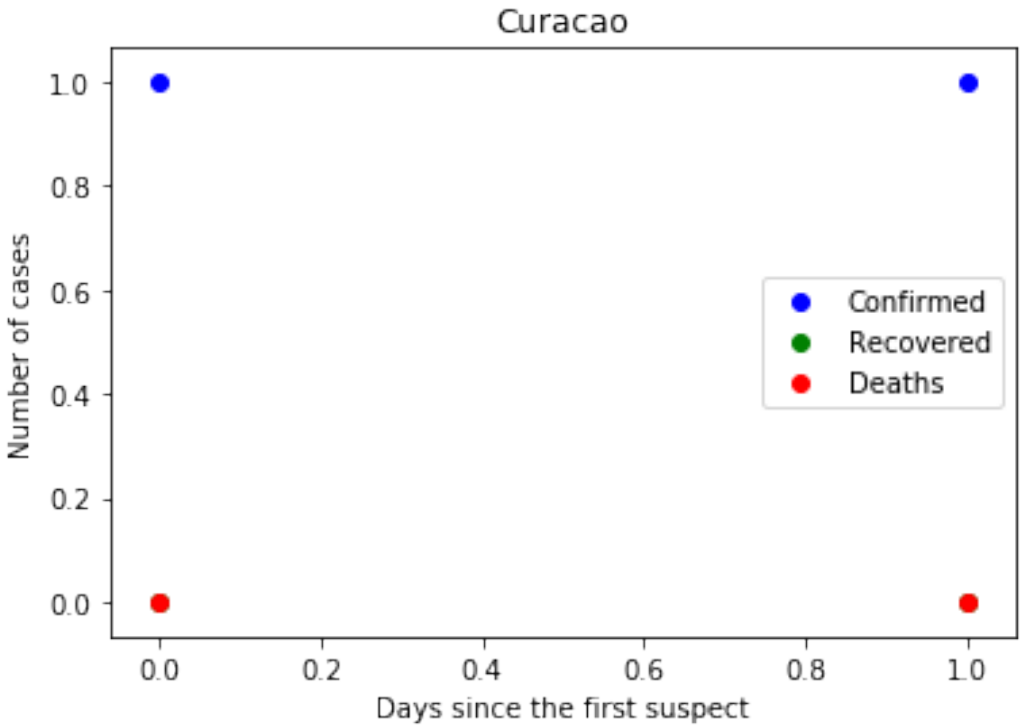

Congo (Brazzaville)
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0.0
0.2
0.4
0.6
0.8
1.0

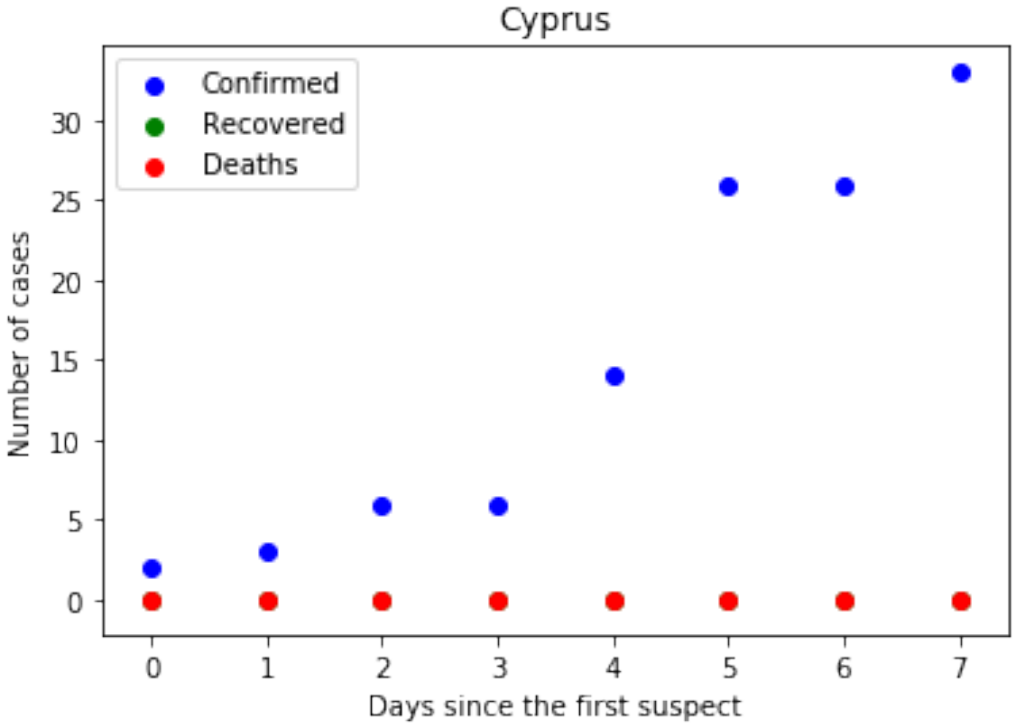

Congo (Kinshasa)
Confirmed
Recovered
Deaths
Number of cases
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0.00
0
1
2
3
4
5
Days since the first suspect

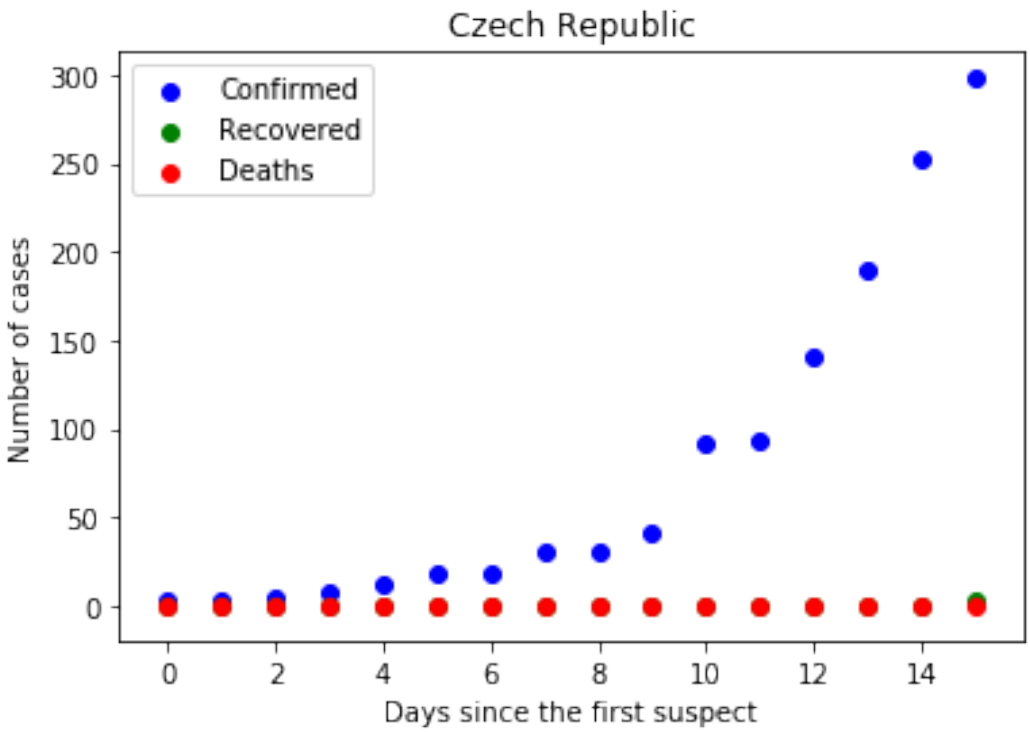

Costa Rica
Confirmed
Recovered
Deaths
Number of cases
35
30
25
20
15
10
5
0
0
2
4
6
8
10
Days since the first suspect

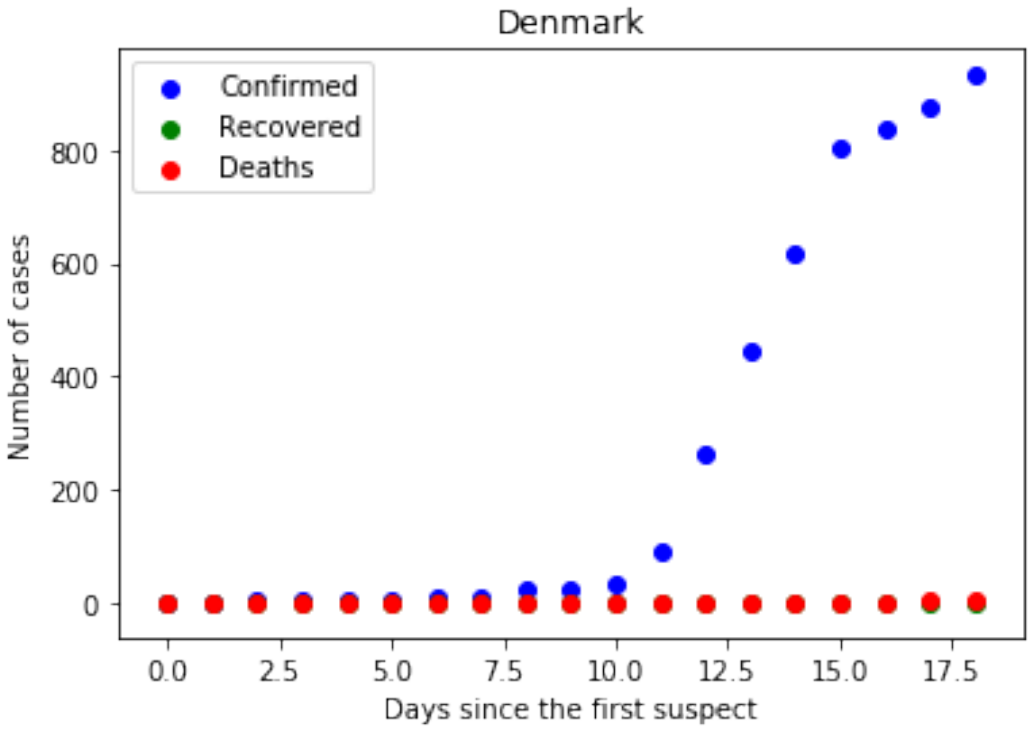

Croatia
Confirmed
Recovered
Deaths
Number of cases
0
10
20
30
40
50
0.0
2.5
5.0
7.5
10.0
12.5
15.0
17.5
20.0
Days since the first suspect

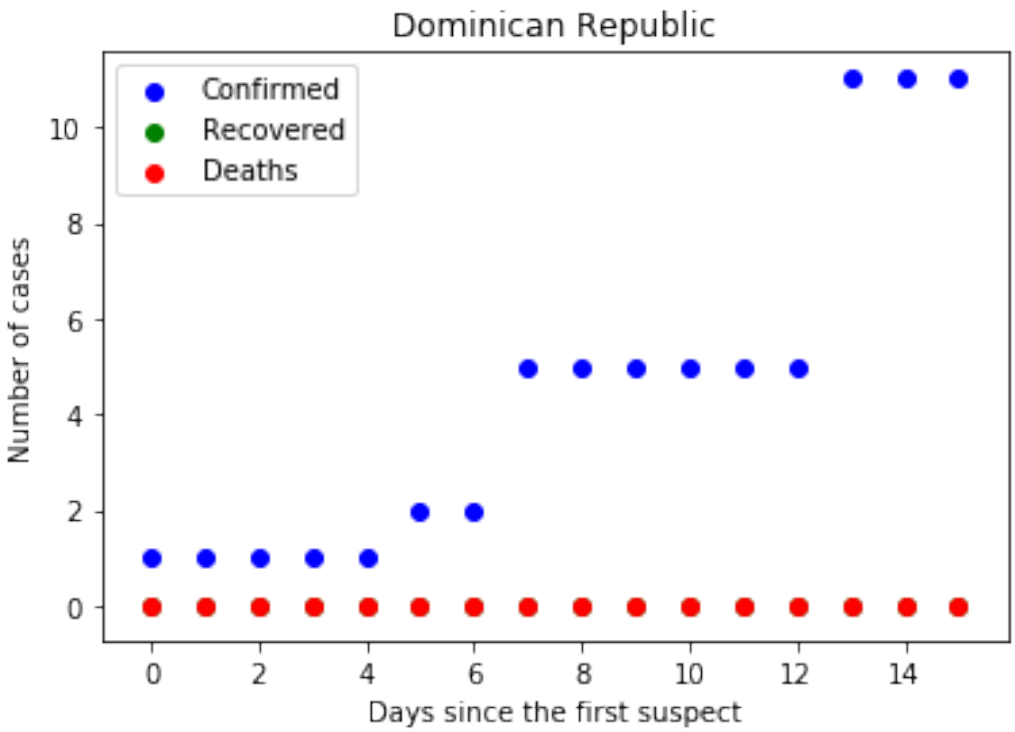

Cuba
Confirmed
Recovered
Deaths
Number of cases
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
Days since the first suspect

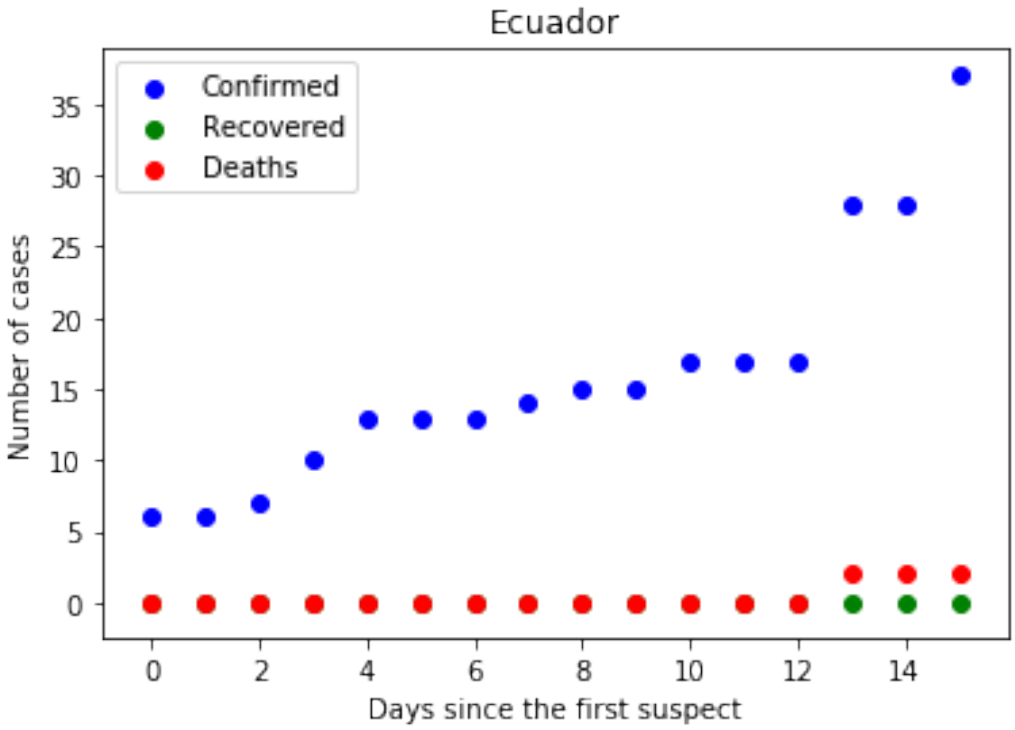

Curacao
Number of cases
Days since the first suspect
Confirmed
Recovered
Deaths
0.0
0.2
0.4
0.6
0.8
1.0

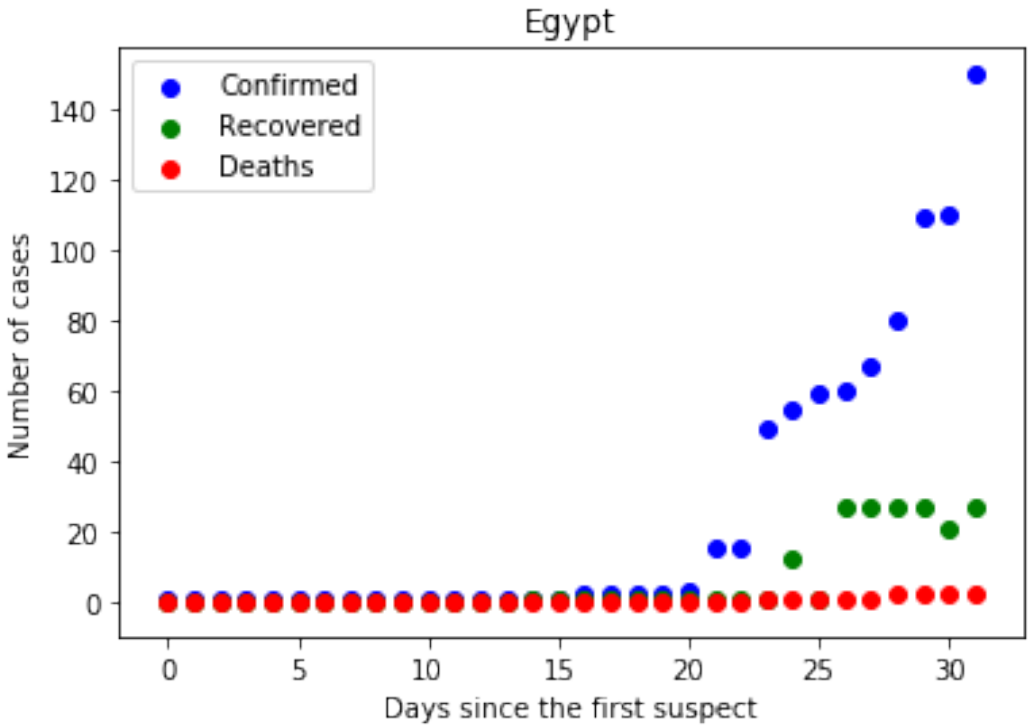

Cyprus
Number of cases
Days since the first suspect
Confirmed
Recovered
Deaths
0
5
10
15
20
25
30
0
1
2
3
4
5
6
7

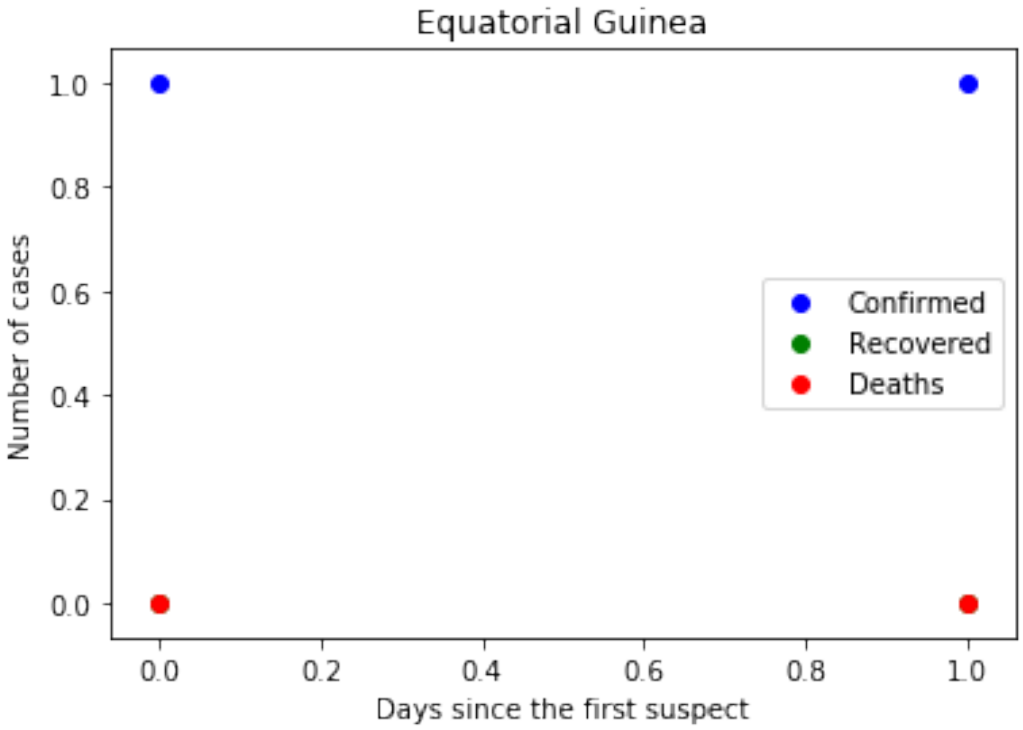

Czech Republic
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
50
100
150
200
250
300
0
2
4
6
8
10
12
14

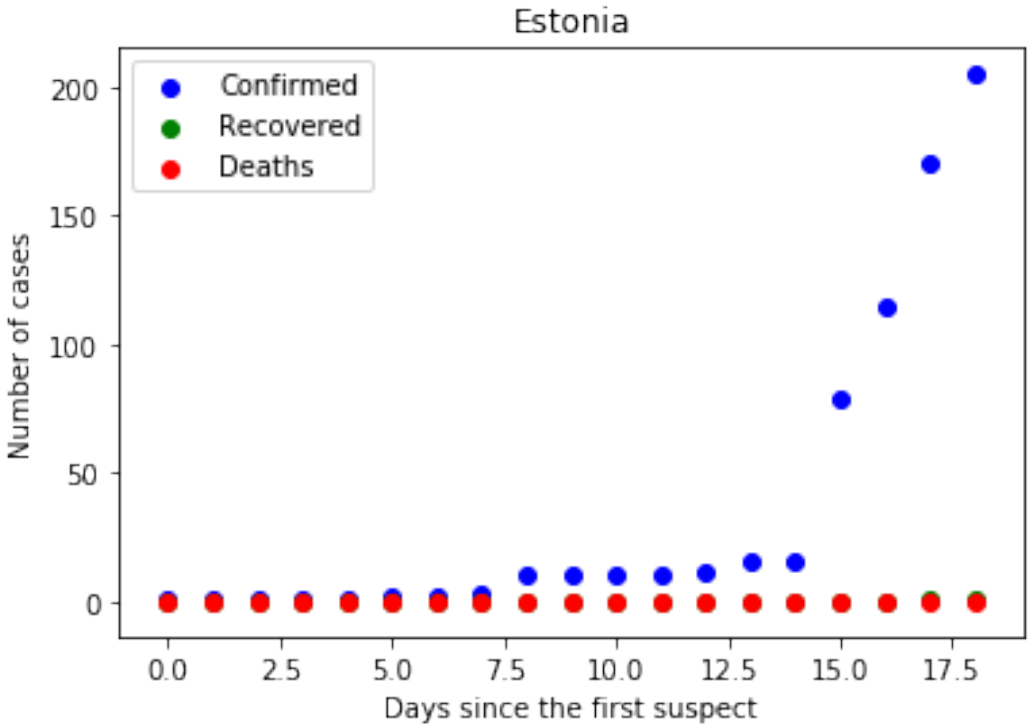

Denmark
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
200
400
600
800
0.0
2.5
5.0
7.5
10.0
12.5
15.0
17.5

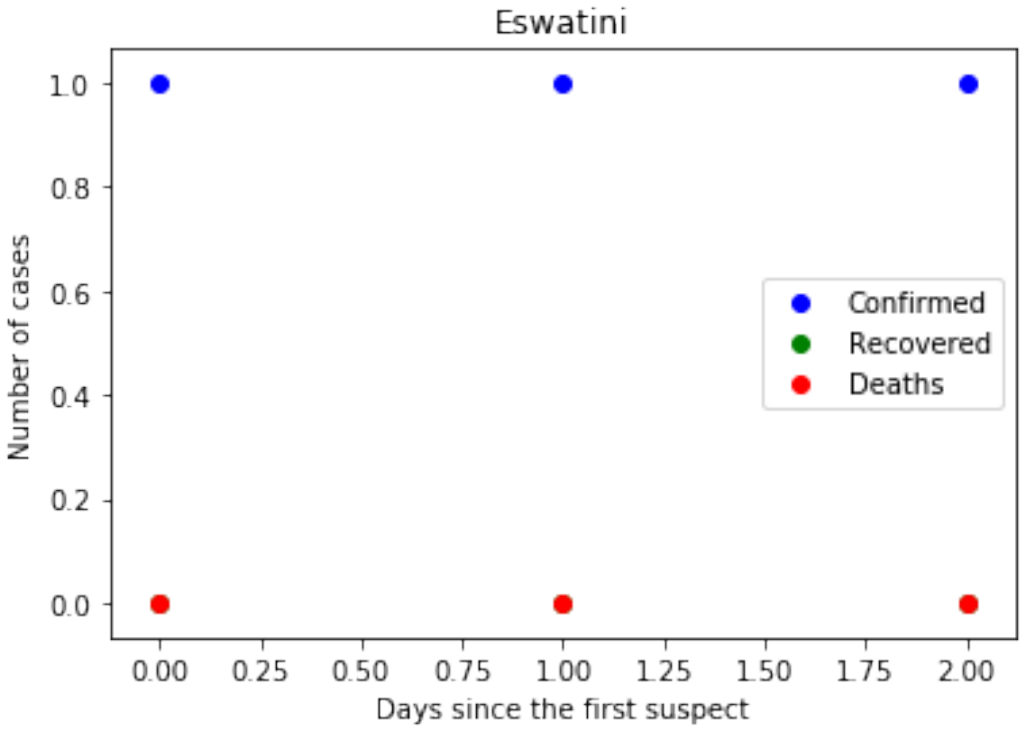

Dominican Republic
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect

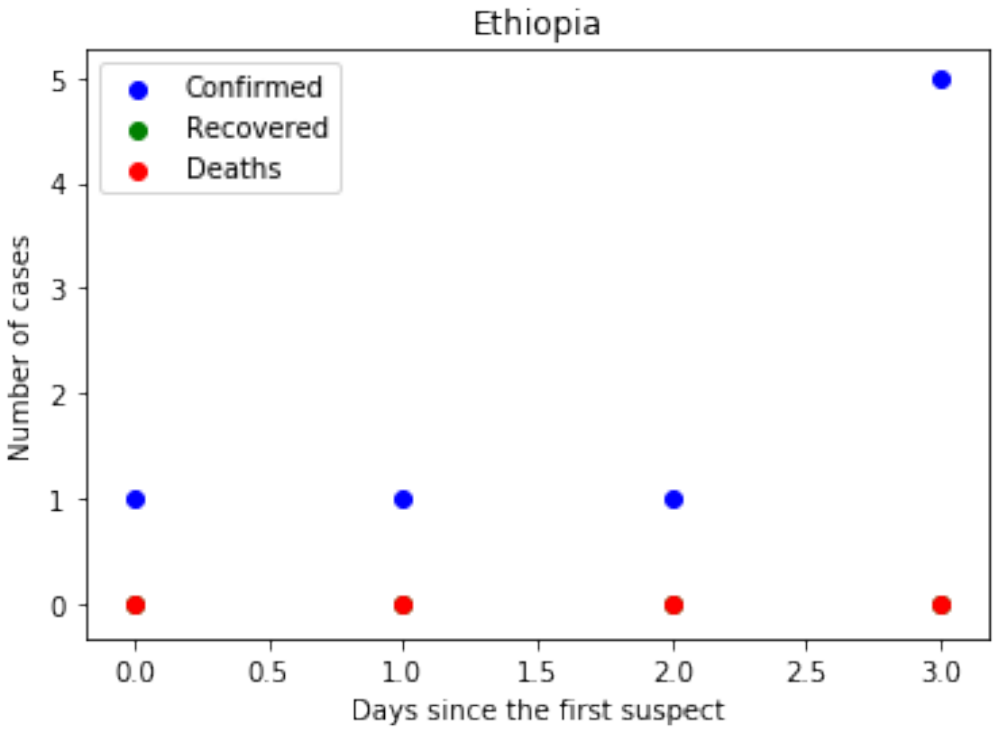

Ecuador
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect

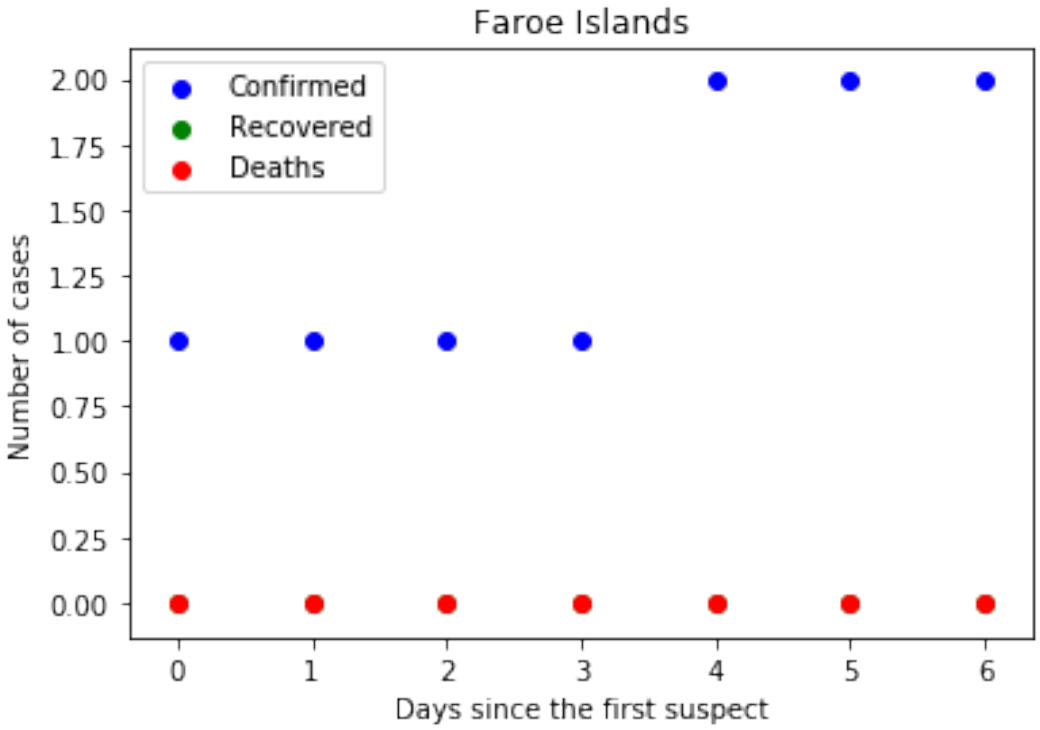

Egypt
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
20
40
60
80
100
120
140
0
5
10
15
20
25
30

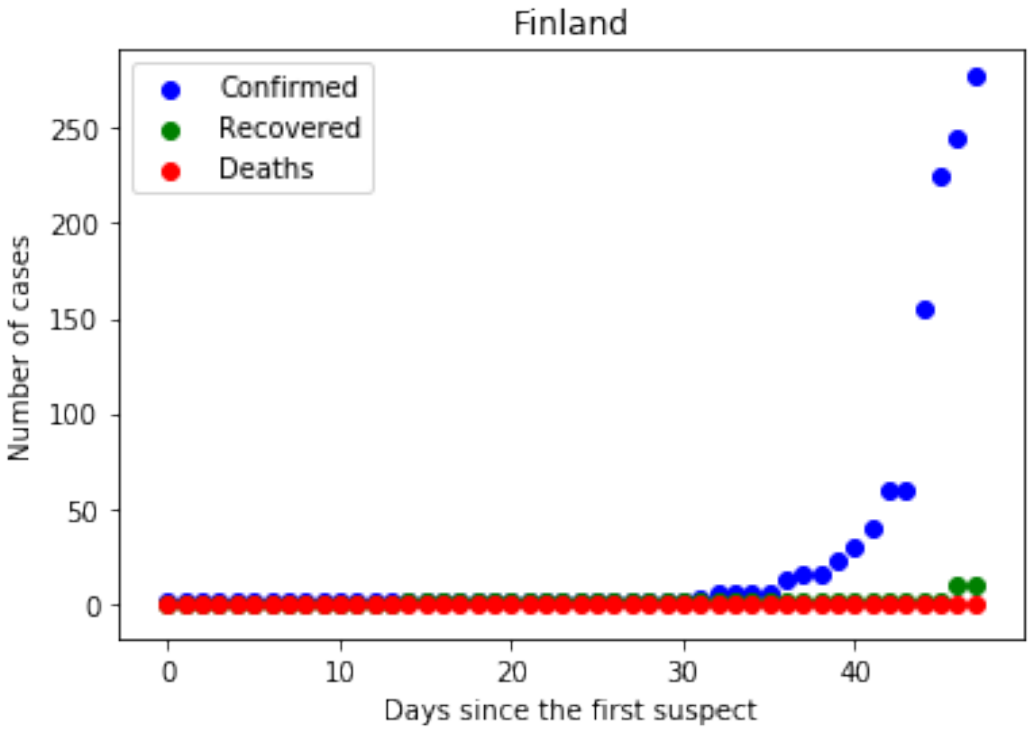

Equatorial Guinea
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0.0
0.2
0.4
0.6
0.8
1.0

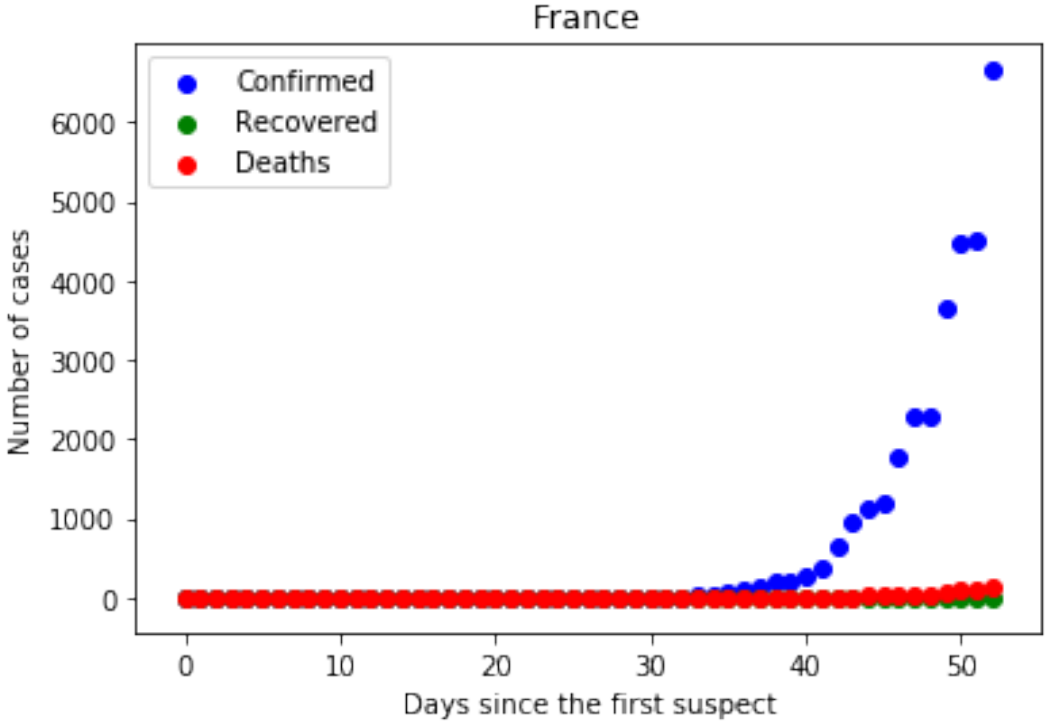

Estonia
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
50
100
150
200
0.0
2.5
5.0
7.5
10.0
12.5
15.0
17.5

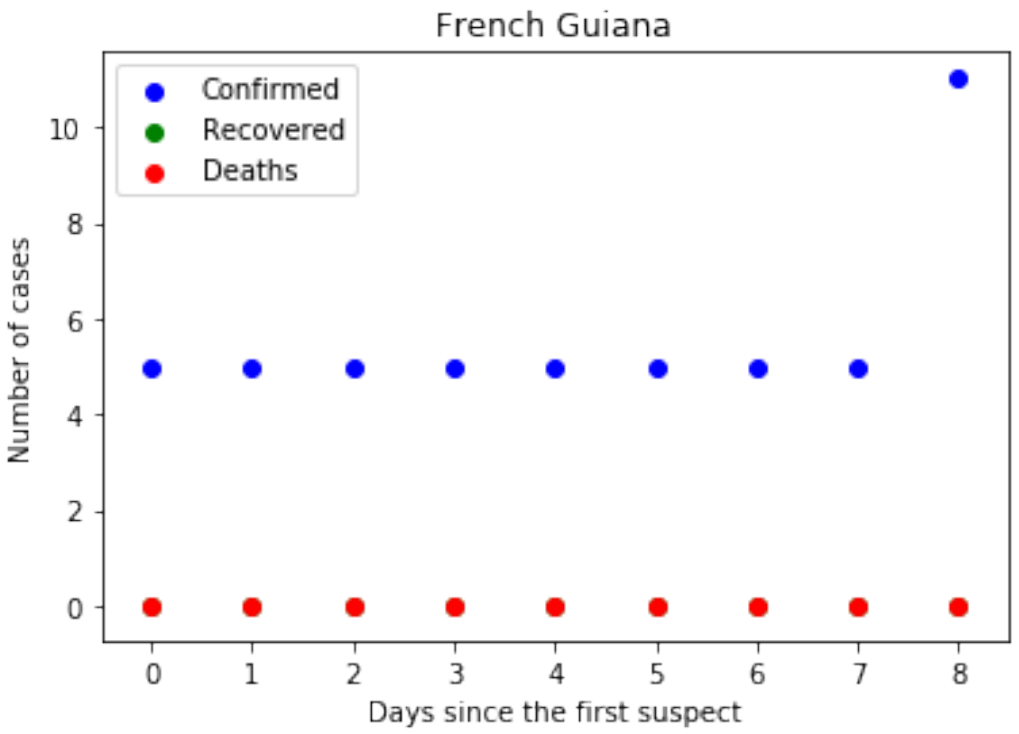

Eswatini
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0.0
0.2
0.4
0.6
0.8
1.0
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
2.00

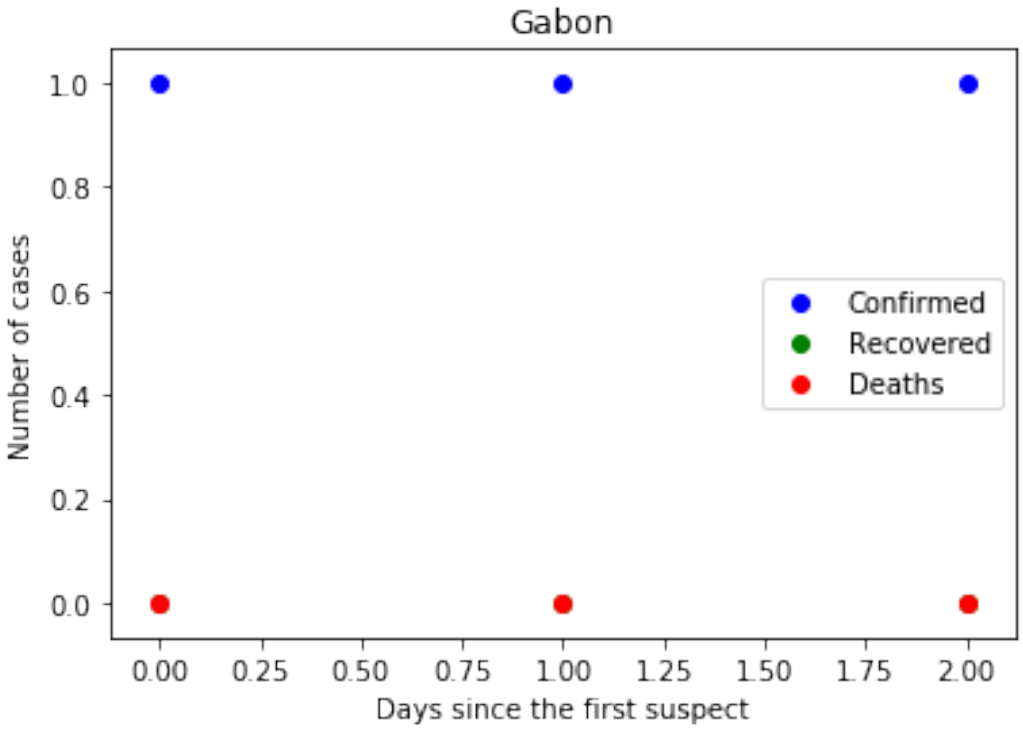

Ethiopia
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
1
2
3
4
5
0.0
0.5
1.0
1.5
2.0
2.5
3.0

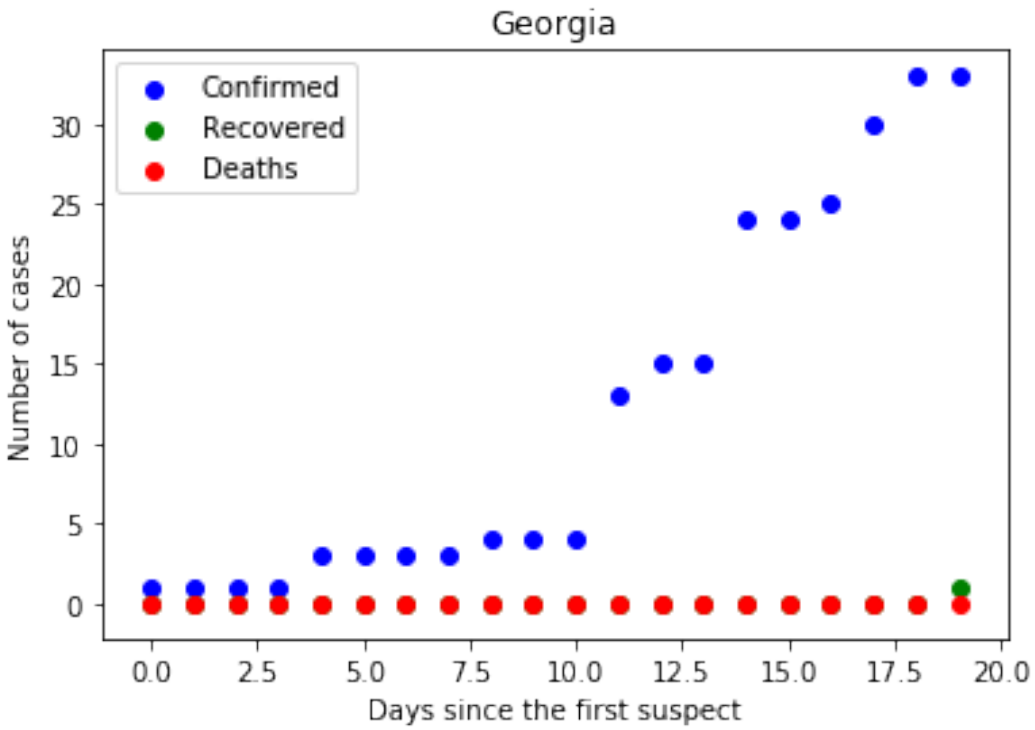

Faroe Islands
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
2.00
0
1
2
3
4
5
6

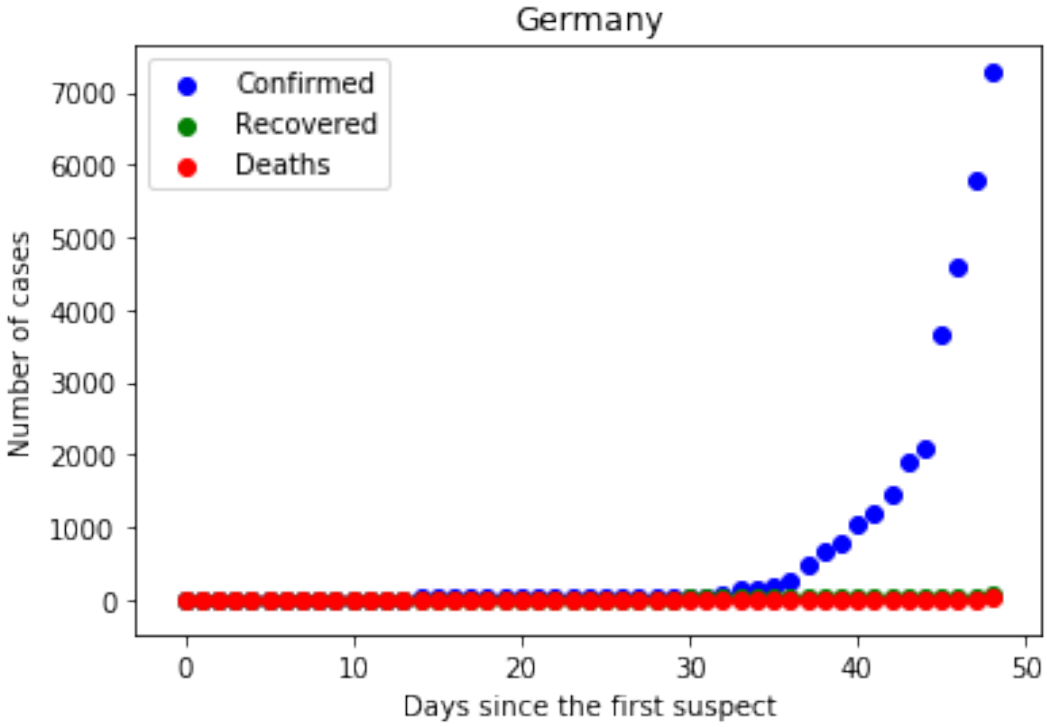

Finland
Confirmed
Recovered
Deaths
Number of cases
0
50
100
150
200
250
0
10
20
30
40
Days since the first suspect

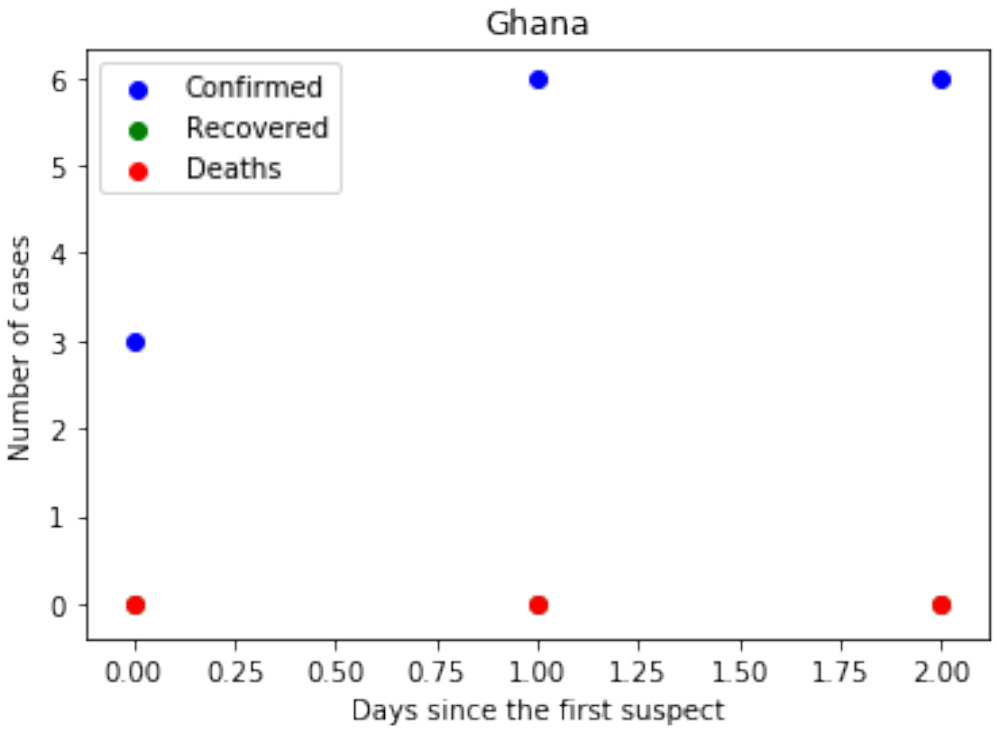

France
Confirmed
Recovered
Deaths
Number of cases
0
1000
2000
3000
4000
5000
6000
0
10
20
30
40
50
Days since the first suspect

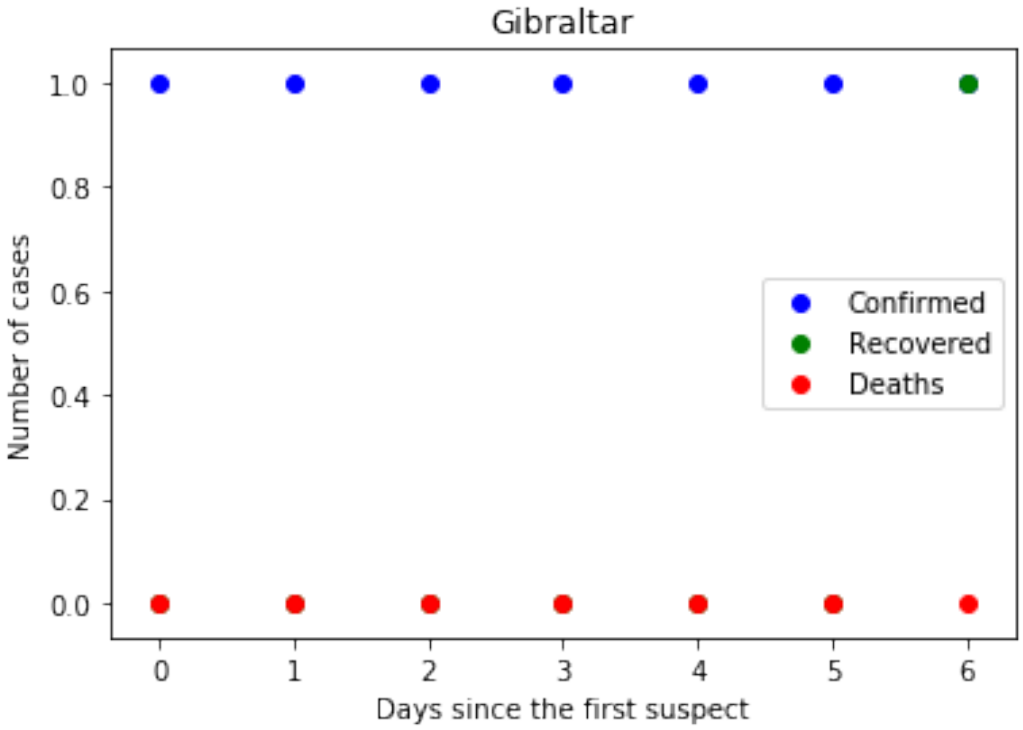

French Guiana
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
1
2
3
4
5
6
7
8
0
2
4
6
8
10

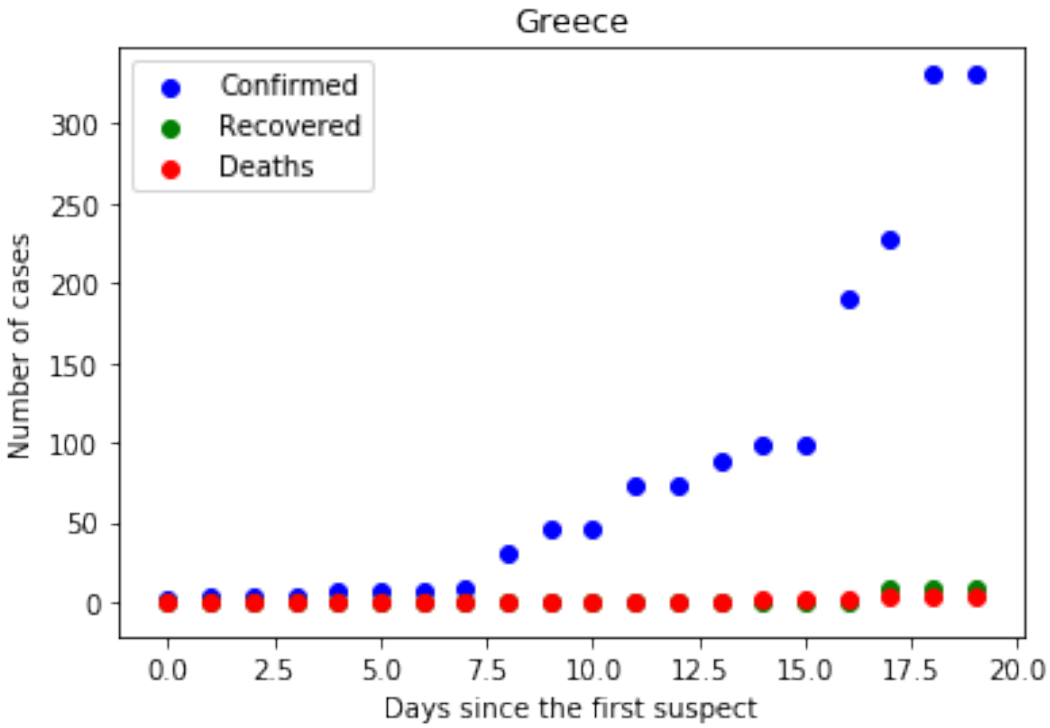

Gabon
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
2.00
0.0
0.2
0.4
0.6
0.8
1.0

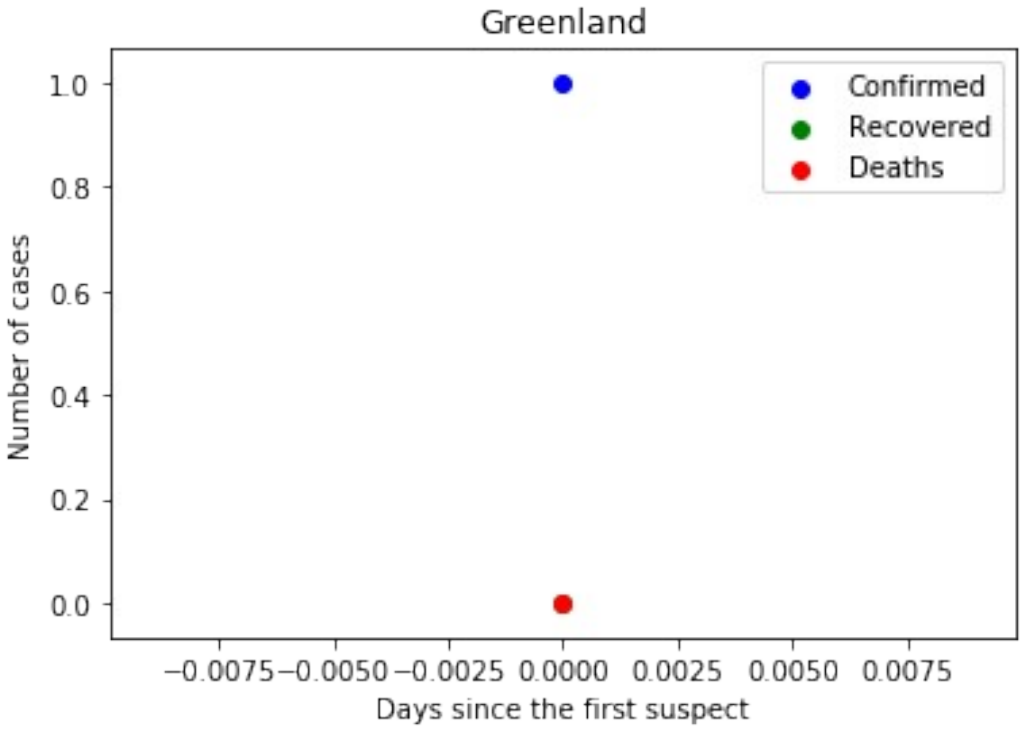

Georgia
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
5
10
15
20
25
30
0.0
2.5
5.0
7.5
10.0
12.5
15.0
17.5
20.0

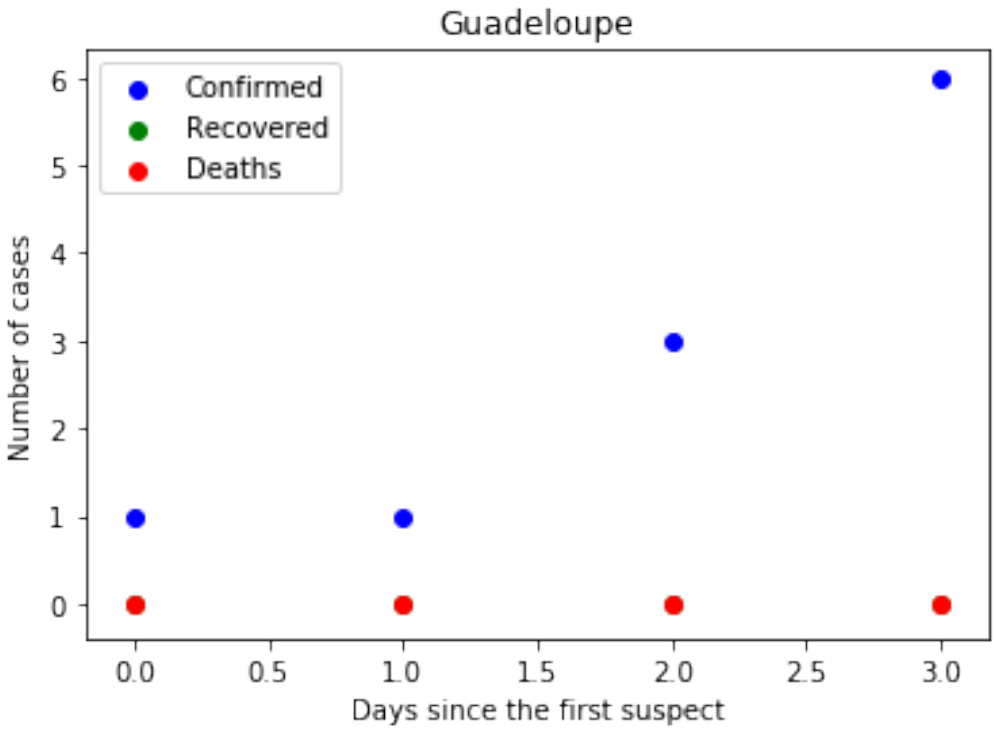

Germany
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
1000
2000
3000
4000
5000
6000
7000
0
10
20
30
40
50

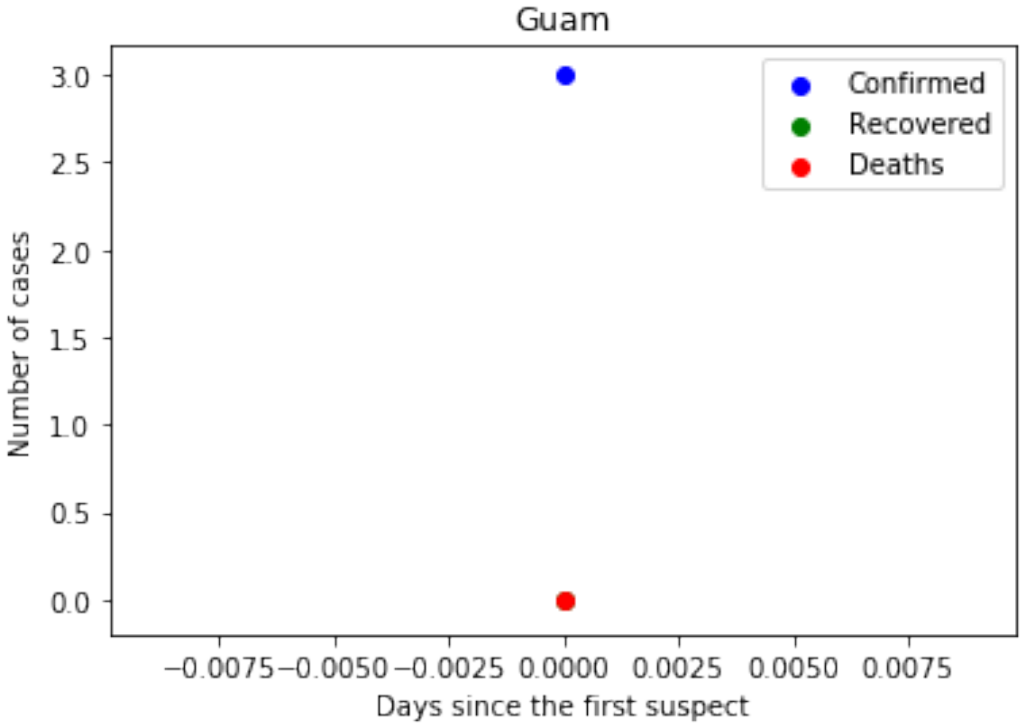

Ghana
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
1
2
3
4
5
6
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
2.00

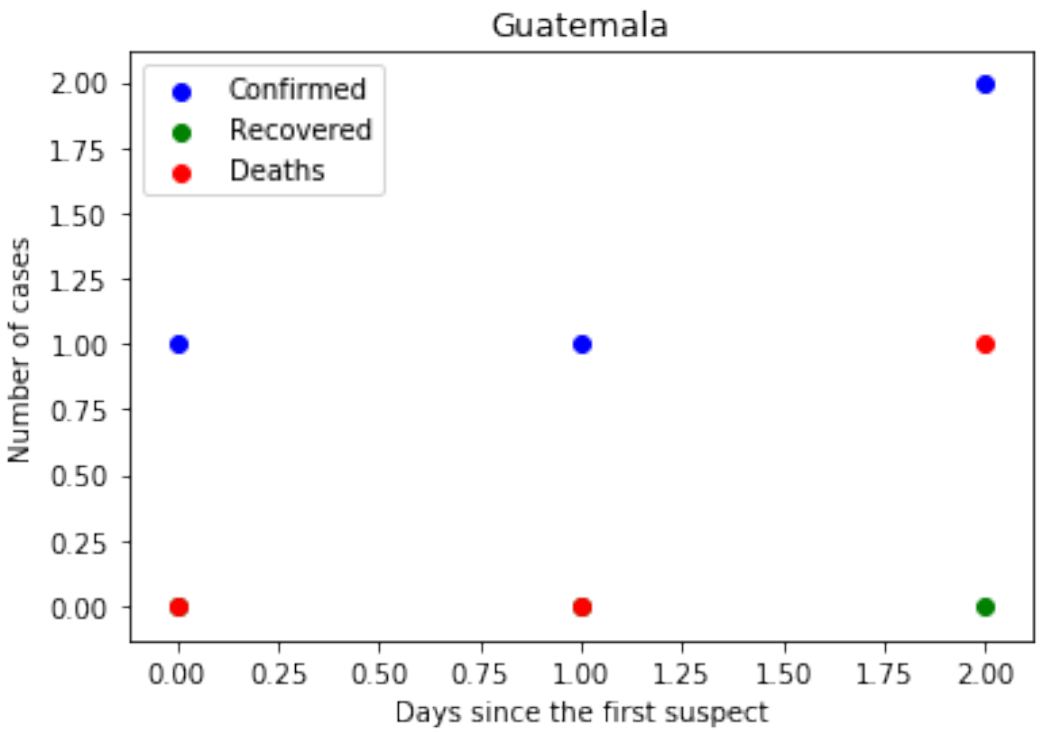

Gibraltar
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0.0
0.2
0.4
0.6
0.8
1.0
0
1
2
3
4
5
6

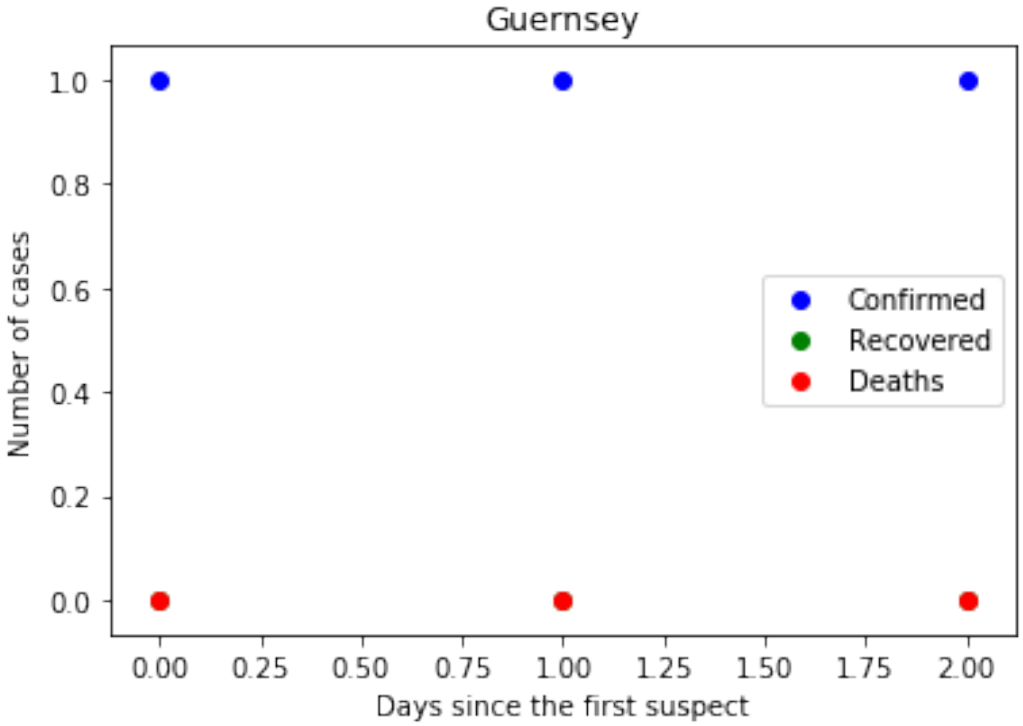

Greece
Confirmed
Recovered
Deaths
Number of cases
0
50
100
150
200
250
300
0.0
2.5
5.0
7.5
10.0
12.5
15.0
17.5
20.0
Days since the first suspect

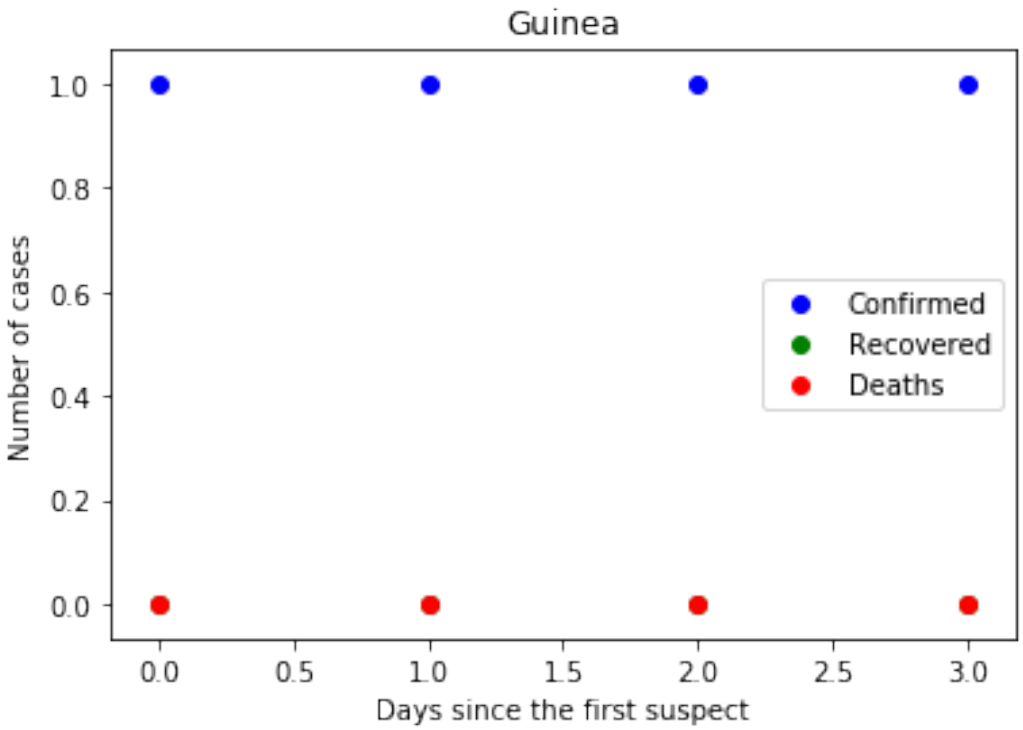

Greenland
Confirmed
Recovered
Deaths
Number of cases
0.0
0.2
0.4
0.6
0.8
1.0
−0.0075
−0.0050
−0.0025
0.0000
0.0025
0.0050
0.0075
Days since the first suspect

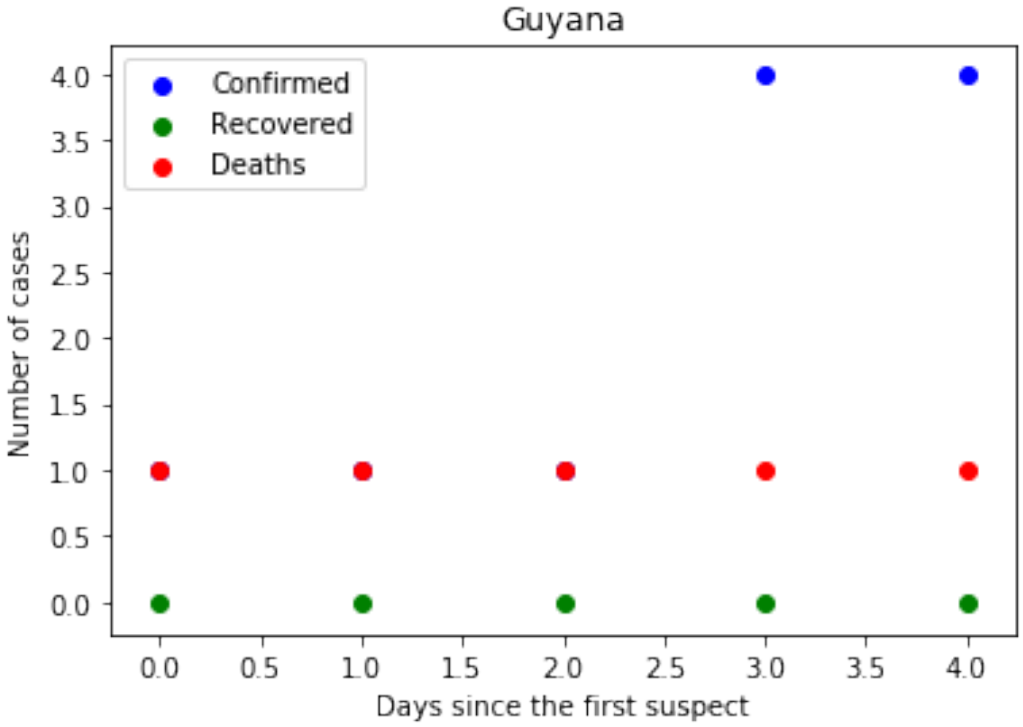

Guadeloupe
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0.0
0.5
1.0
1.5
2.0
2.5
3.0
0
1
2
3
4
5
6

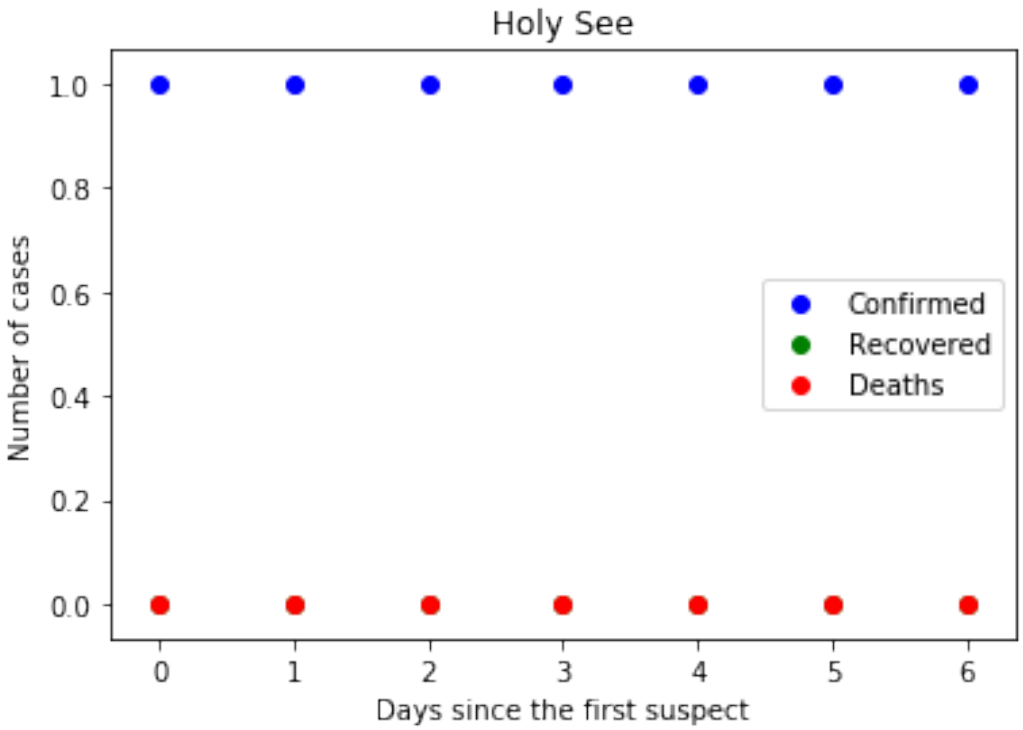

Guam
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
−0.0075
−0.0050
−0.0025
0.0000
0.0025
0.0050
0.0075
0.0
0.5
1.0
1.5
2.0
2.5
3.0

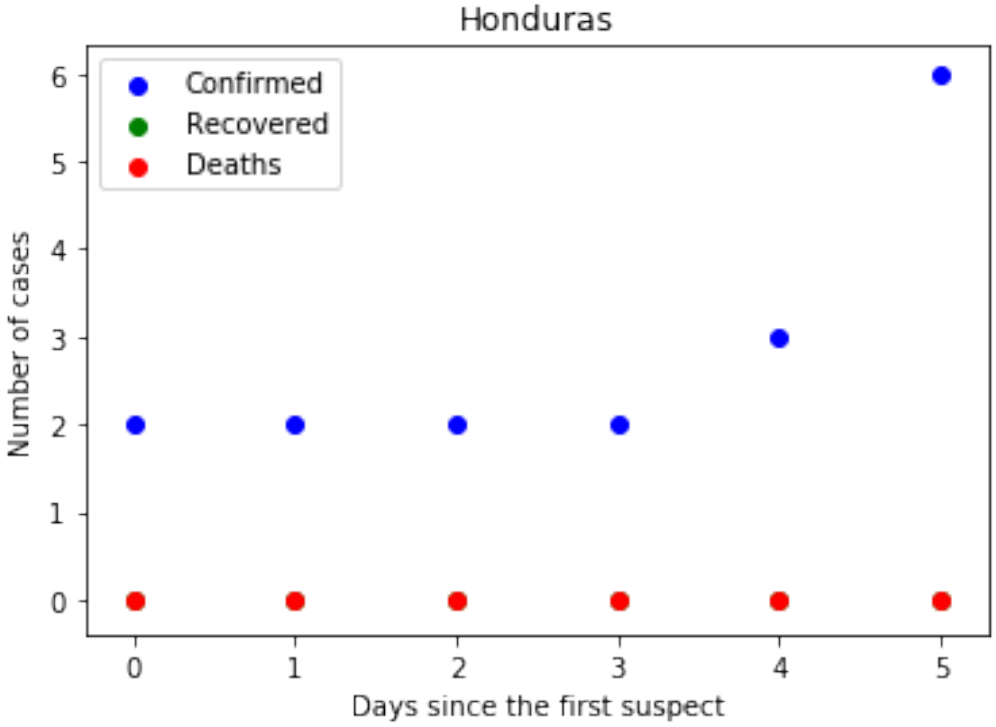

Guatemala
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
2.00

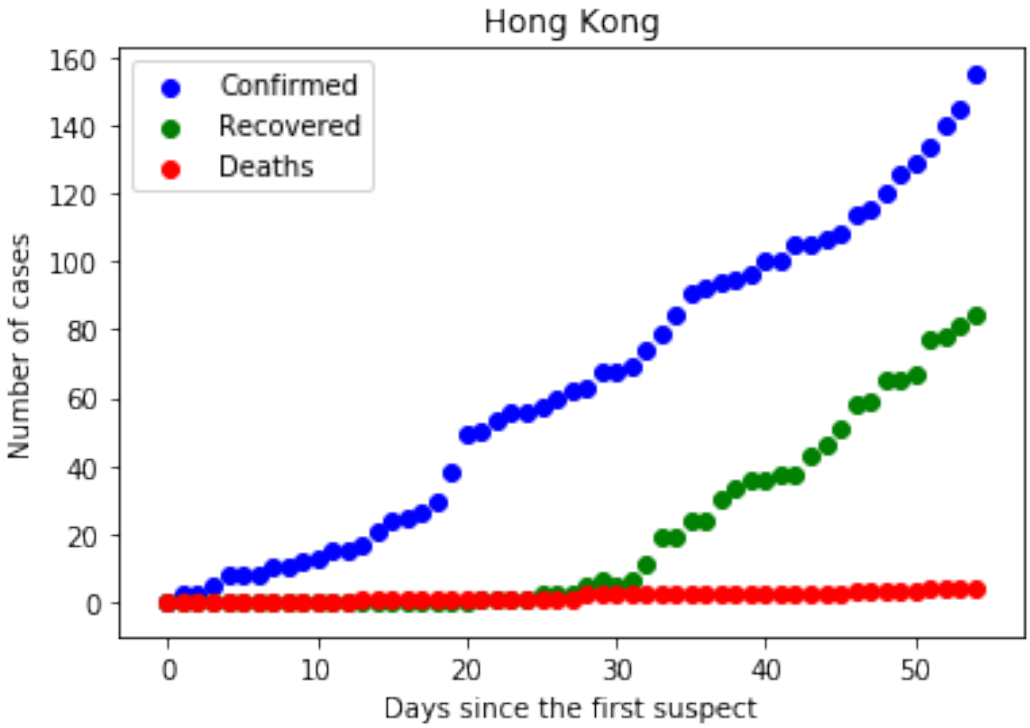

Guernsey
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0.0
0.2
0.4
0.6
0.8
1.0
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
2.00

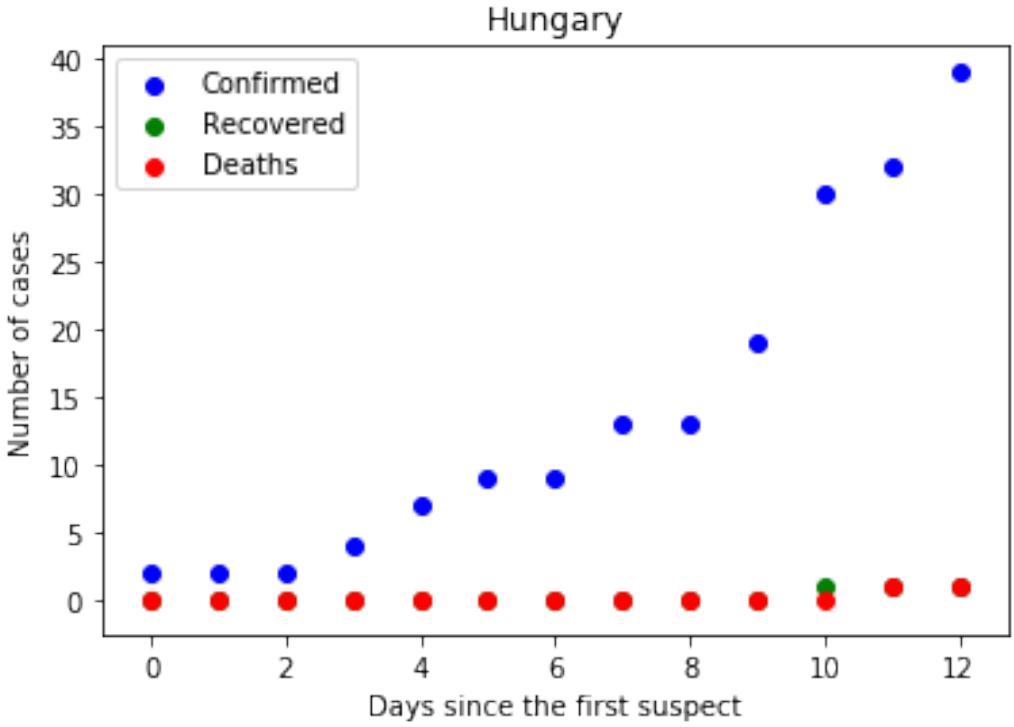

Guinea
Number of cases
Days since the first suspect
Confirmed
Recovered
Deaths
1.0
0.8
0.6
0.4
0.2
0.0
0.0
0.5
1.0
1.5
2.0
2.5
3.0

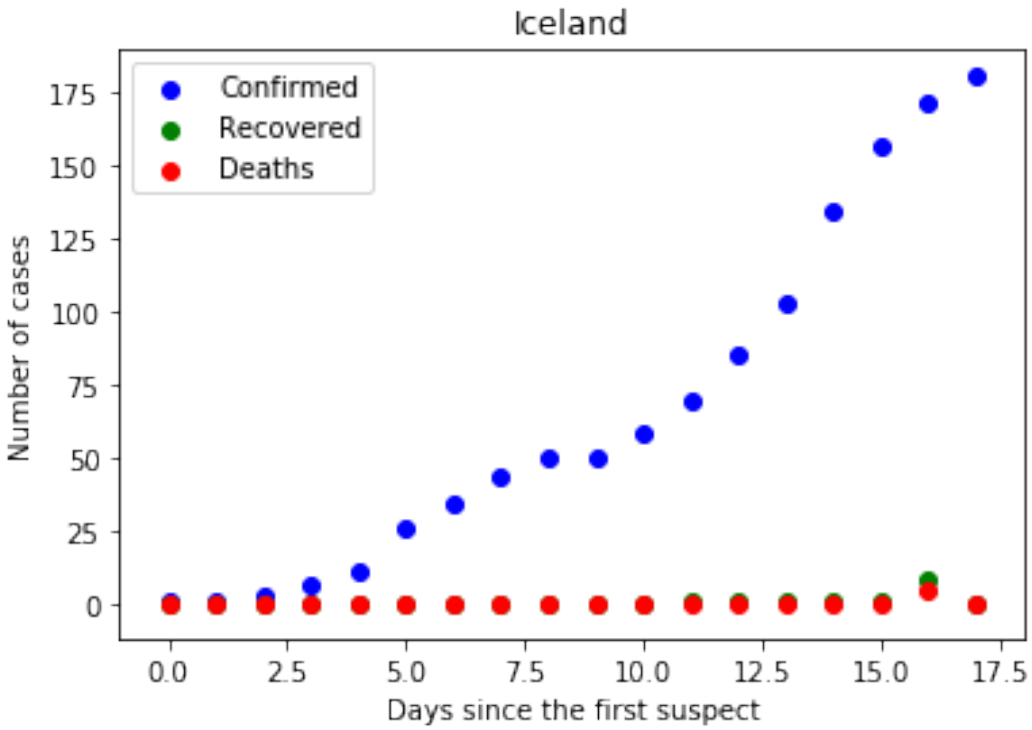

Guyana
Number of cases
Days since the first suspect
Confirmed
Recovered
Deaths
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0

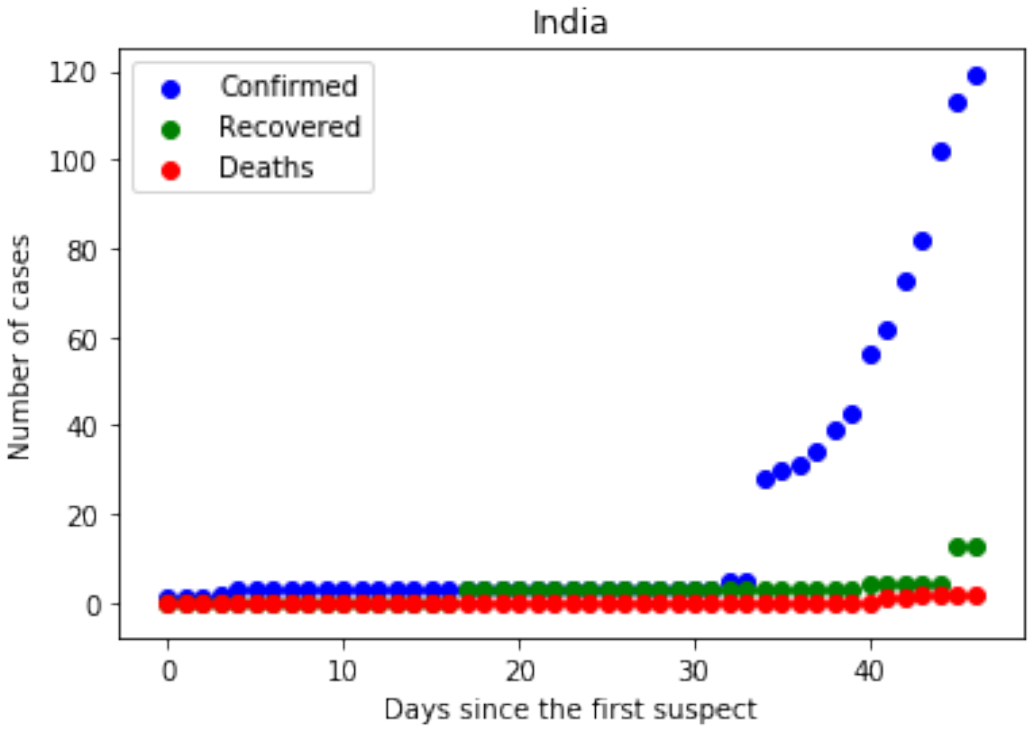

Holy See
Number of cases
Days since the first suspect
Confirmed
Recovered
Deaths
0.0
0.2
0.4
0.6
0.8
1.0
0
1
2
3
4
5
6

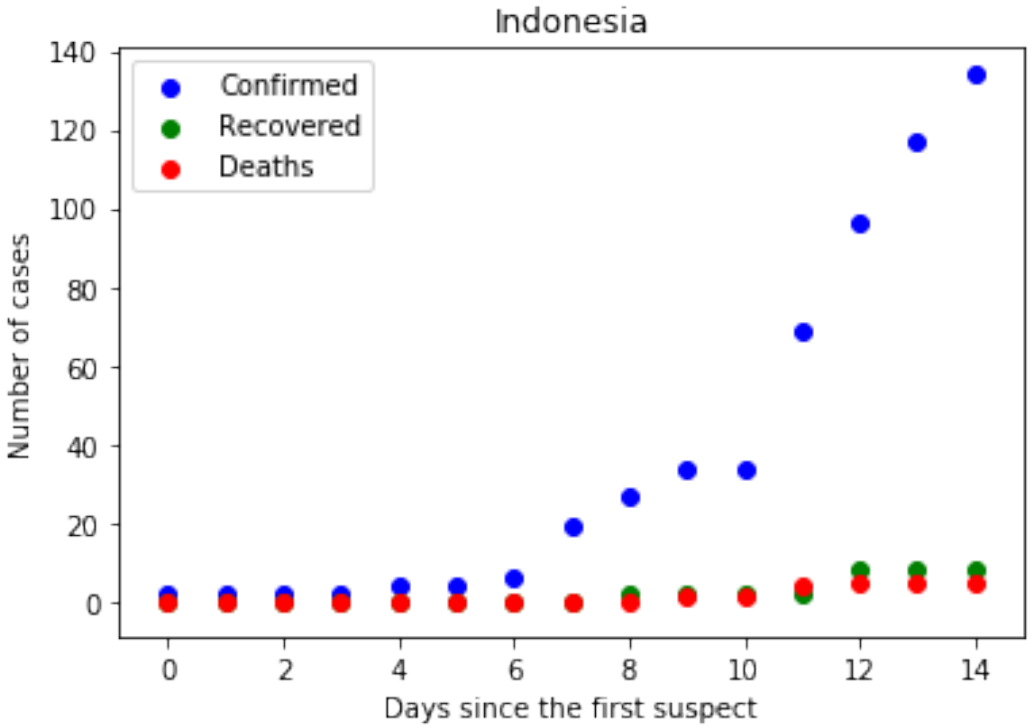

Honduras
Number of cases
Days since the first suspect
Confirmed
Recovered
Deaths
0
1
2
3
4
5
6

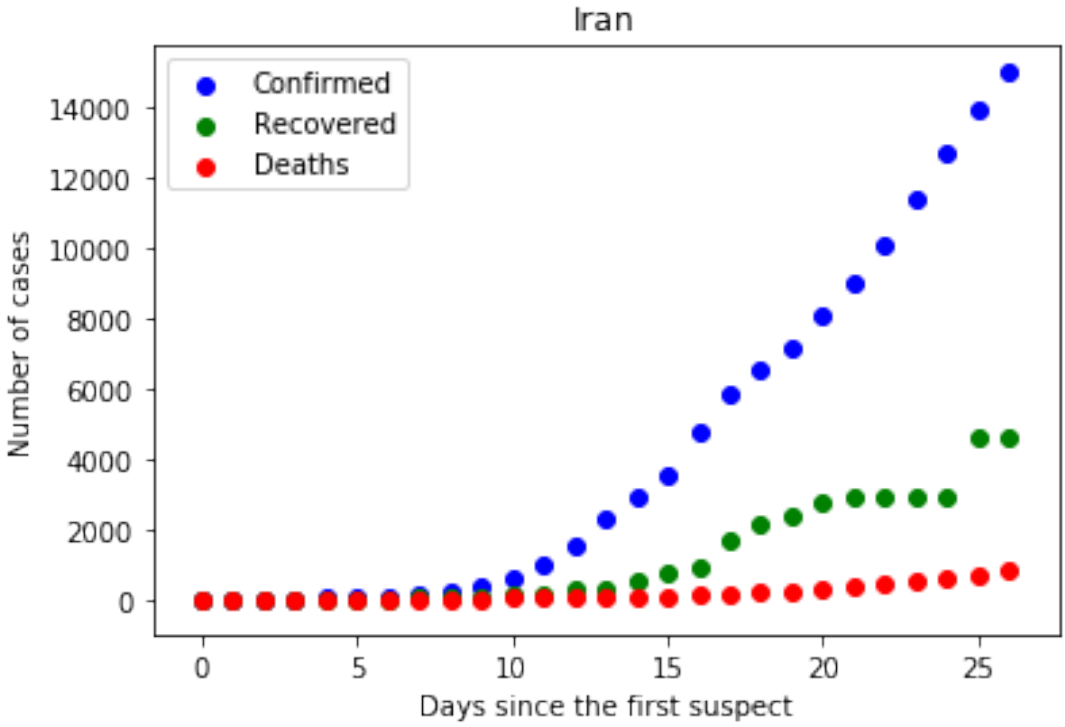

Hong Kong
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
20
40
60
80
100
120
140
160
0
10
20
30
40
50

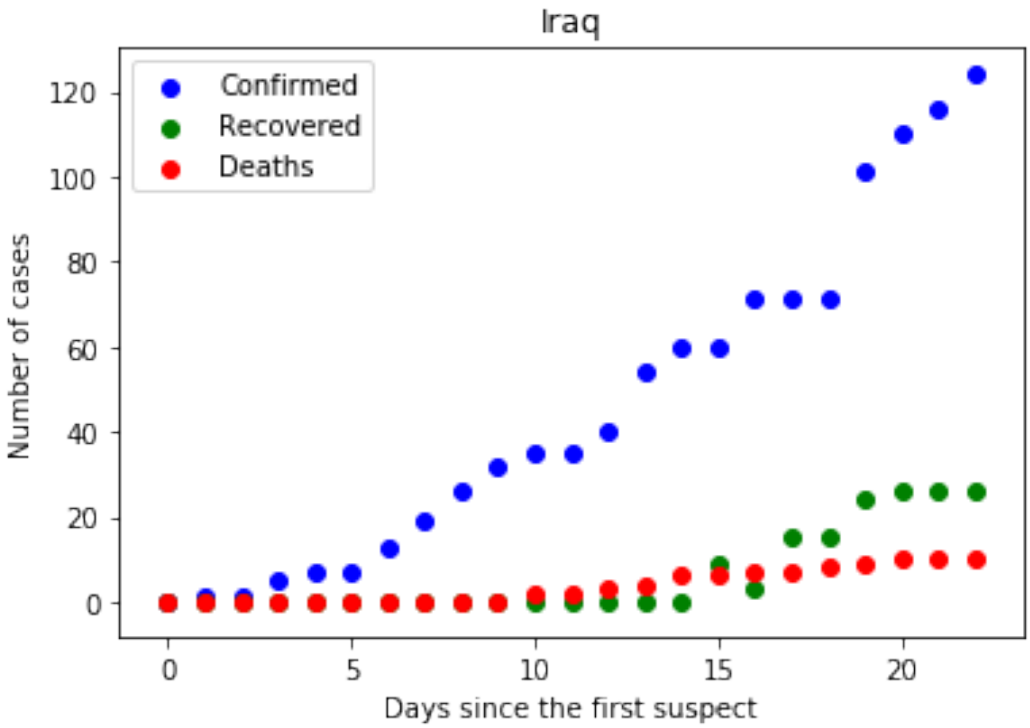

Hungary
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
5
10
15
20
25
30
35
40
0
2
4
6
8
10
12

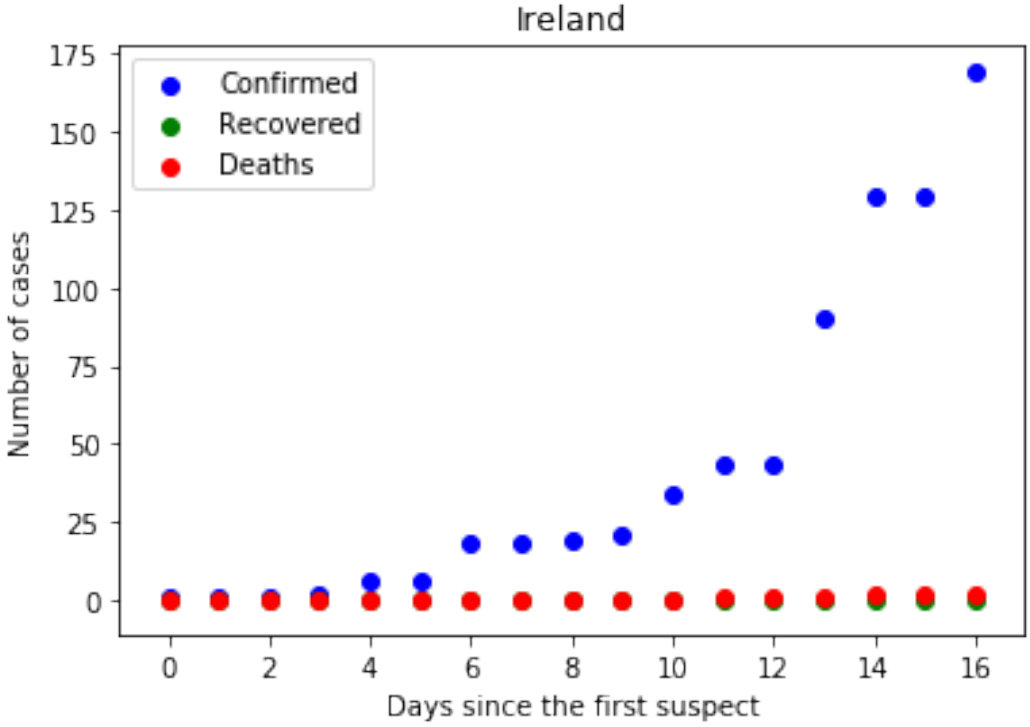

Iceland
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
25
50
75
100
125
150
175
0.0
2.5
5.0
7.5
10.0
12.5
15.0
17.5

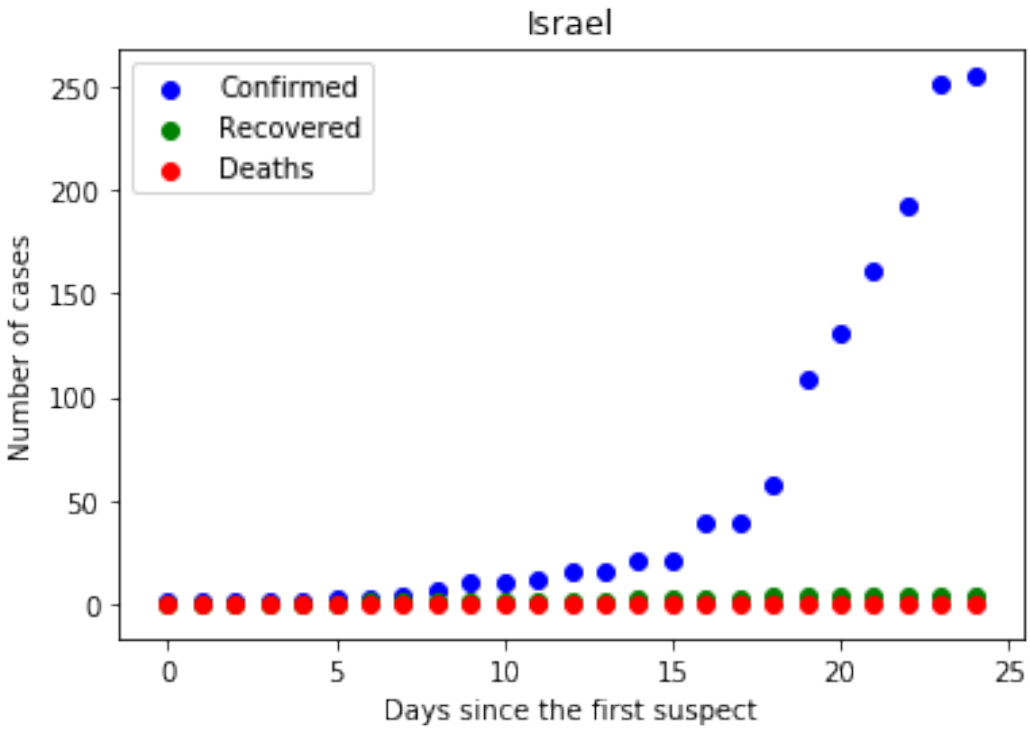

India
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
20
40
60
80
100
120
0
10
20
30
40

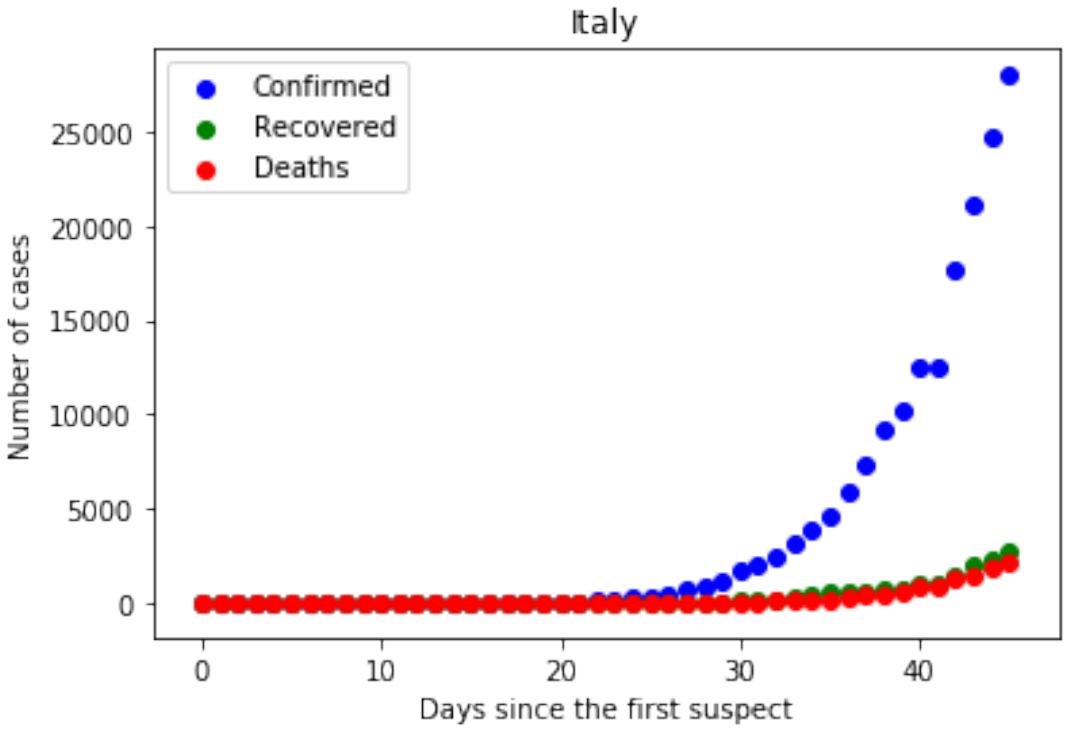

Indonesia
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
20
40
60
80
100
120
140
0
2
4
6
8
10
12
14

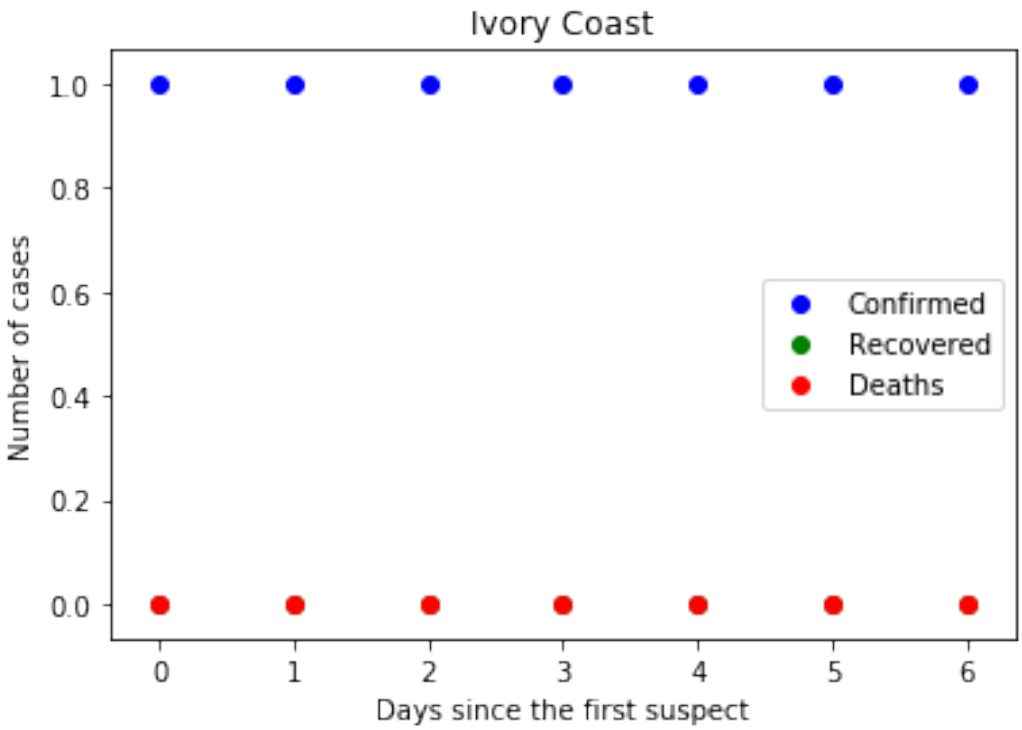

Iran
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
2000
4000
6000
8000
10000
12000
14000
0
5
10
15
20
25

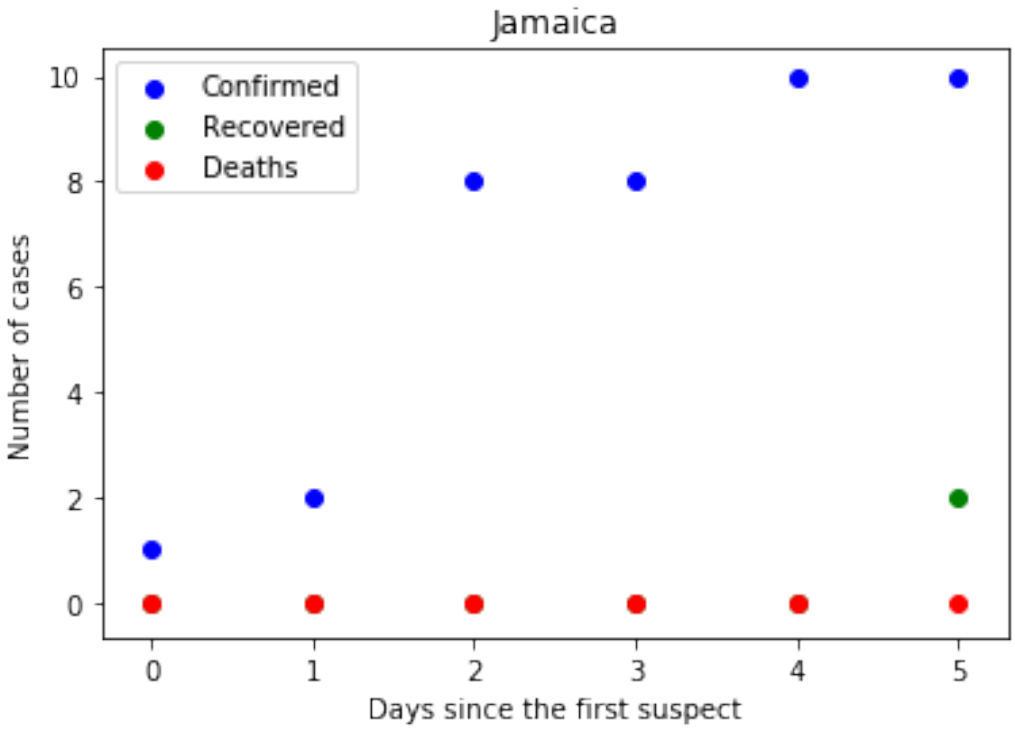

Iraq
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
20
40
60
80
100
120
0
5
10
15
20

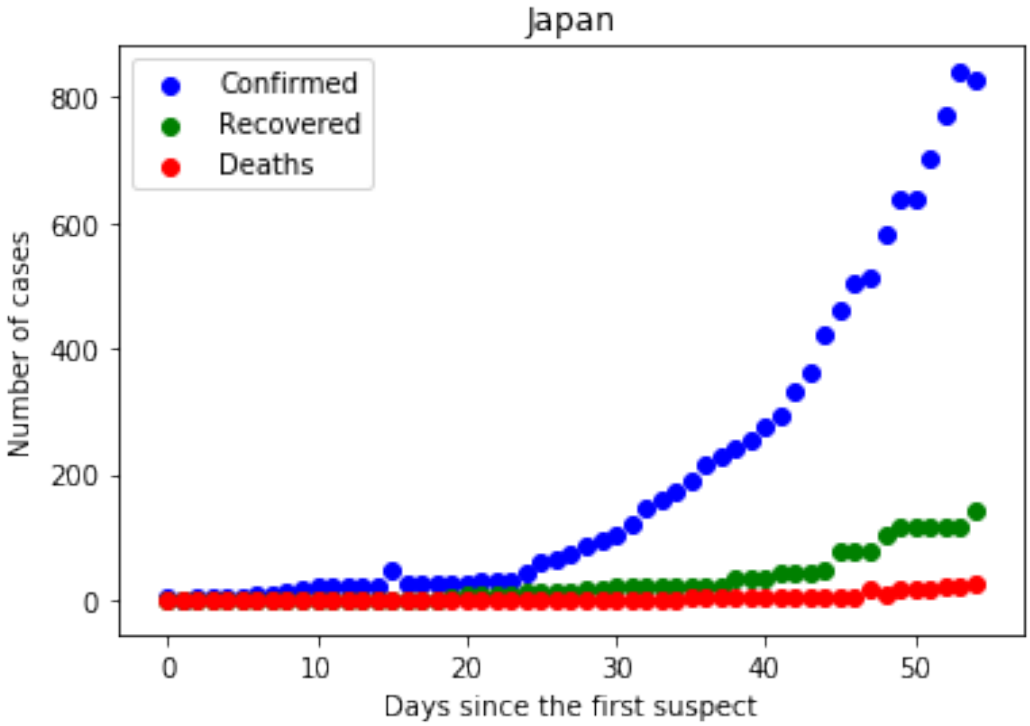

Ireland
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
25
50
75
100
125
150
175
0
2
4
6
8
10
12
14
16

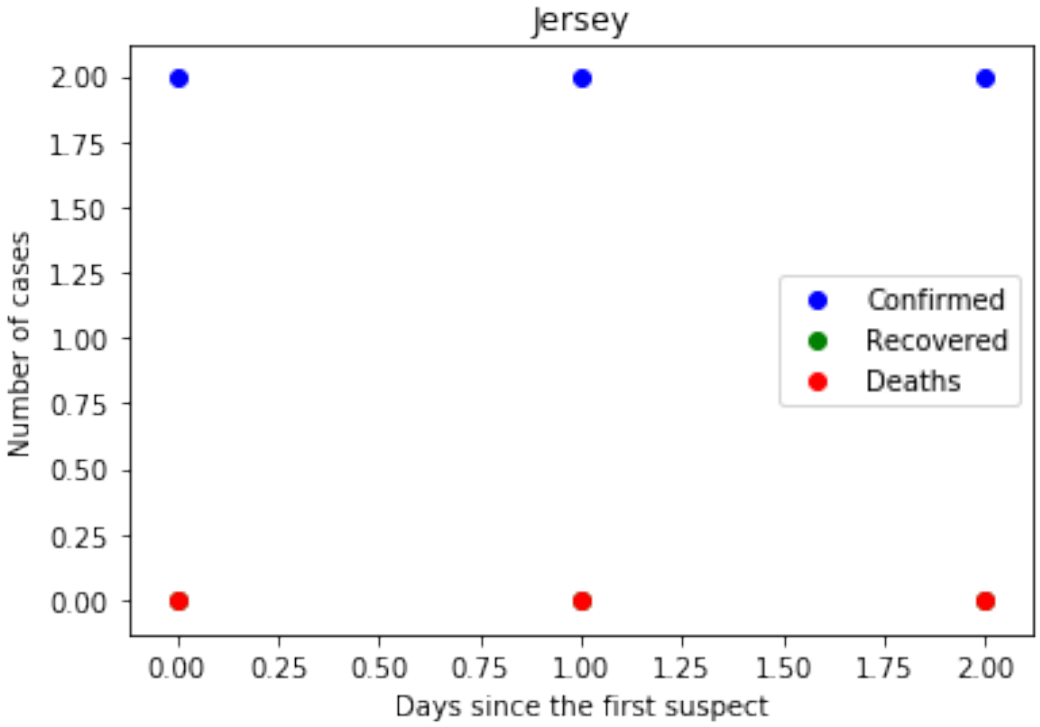

Israel
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
50
100
150
200
250
0
5
10
15
20
25

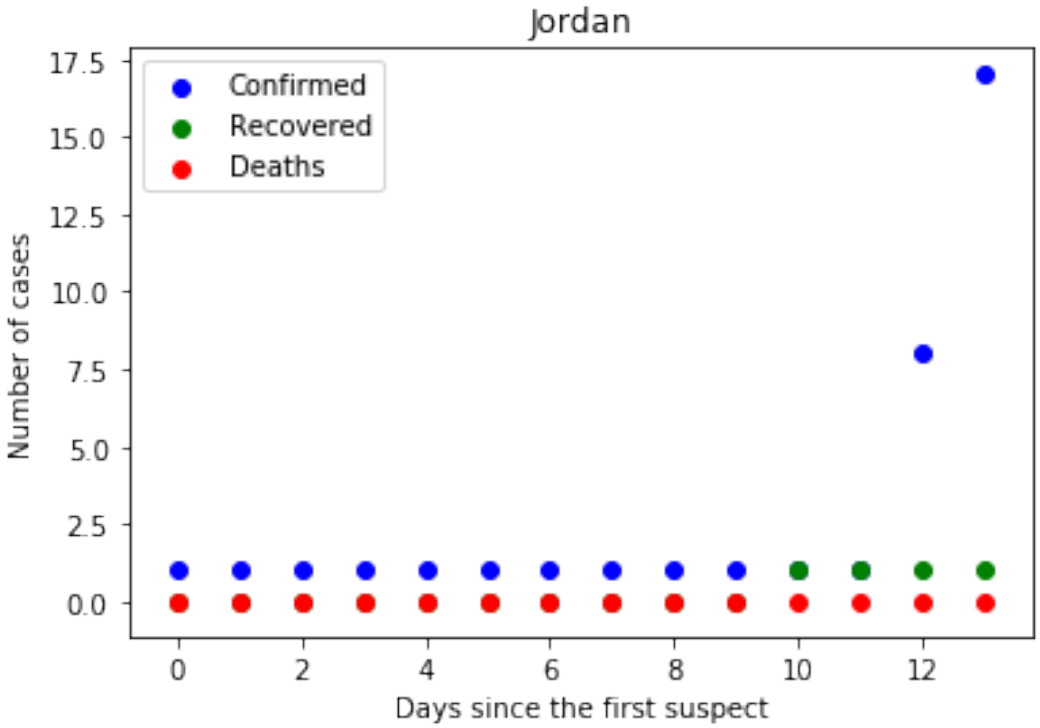

Italy
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
5000
10000
15000
20000
25000
0
10
20
30
40

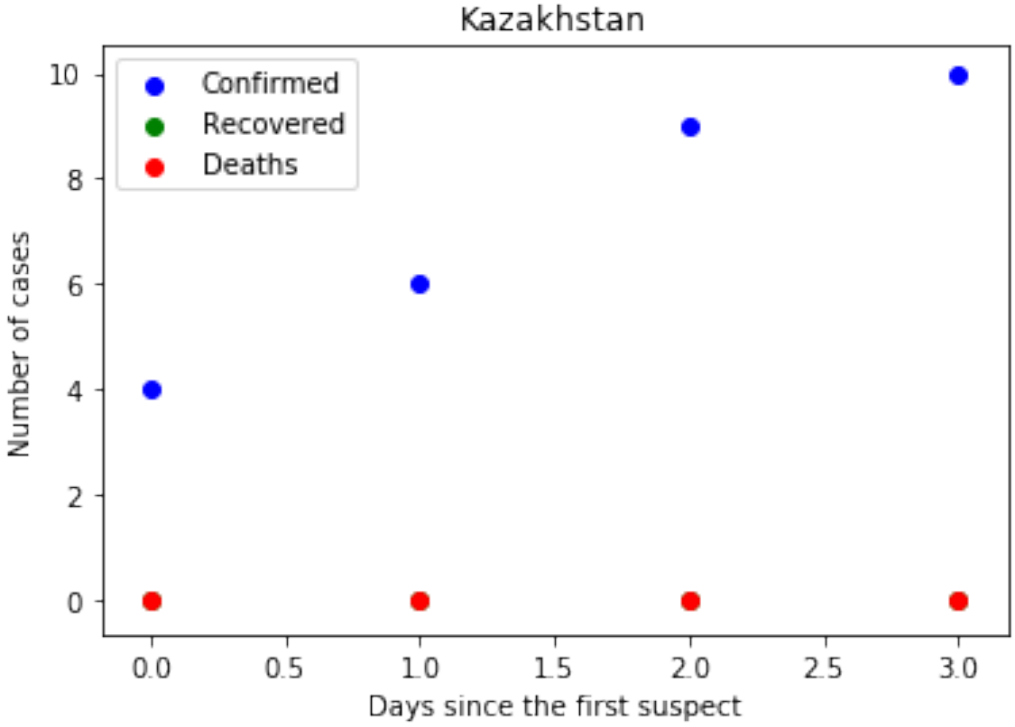

Ivory Coast
Number of cases
Days since the first suspect
Confirmed
Recovered
Deaths
0.0
0.2
0.4
0.6
0.8
1.0
0
1
2
3
4
5
6

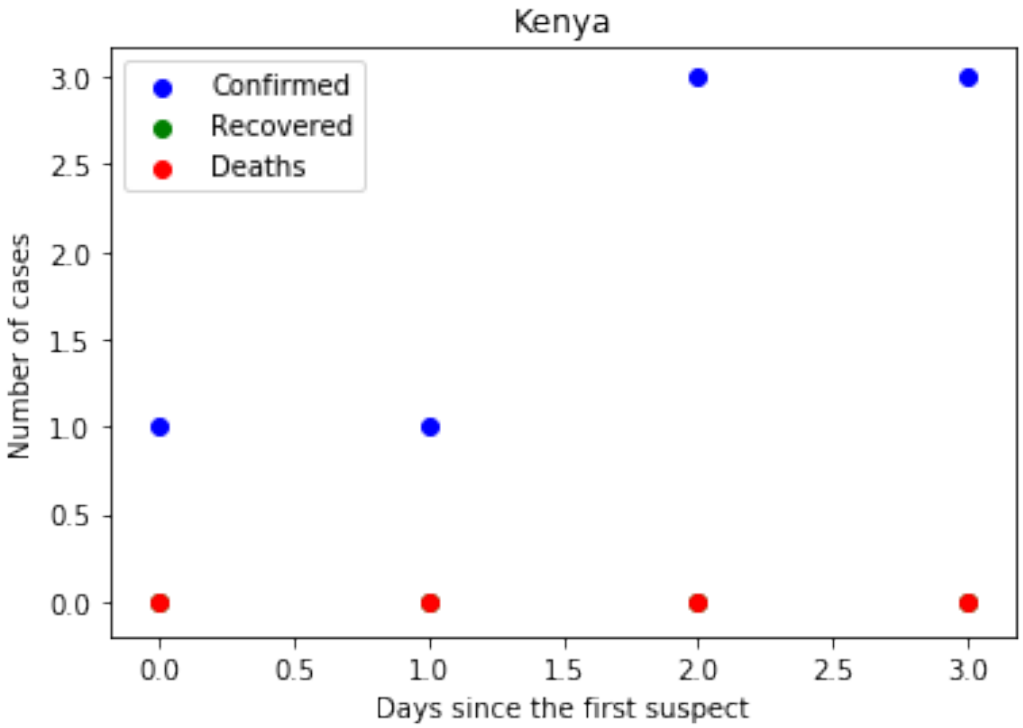

Jamaica
Number of cases
Days since the first suspect
Confirmed
Recovered
Deaths
0
2
4
6
8
10
0
1
2
3
4
5

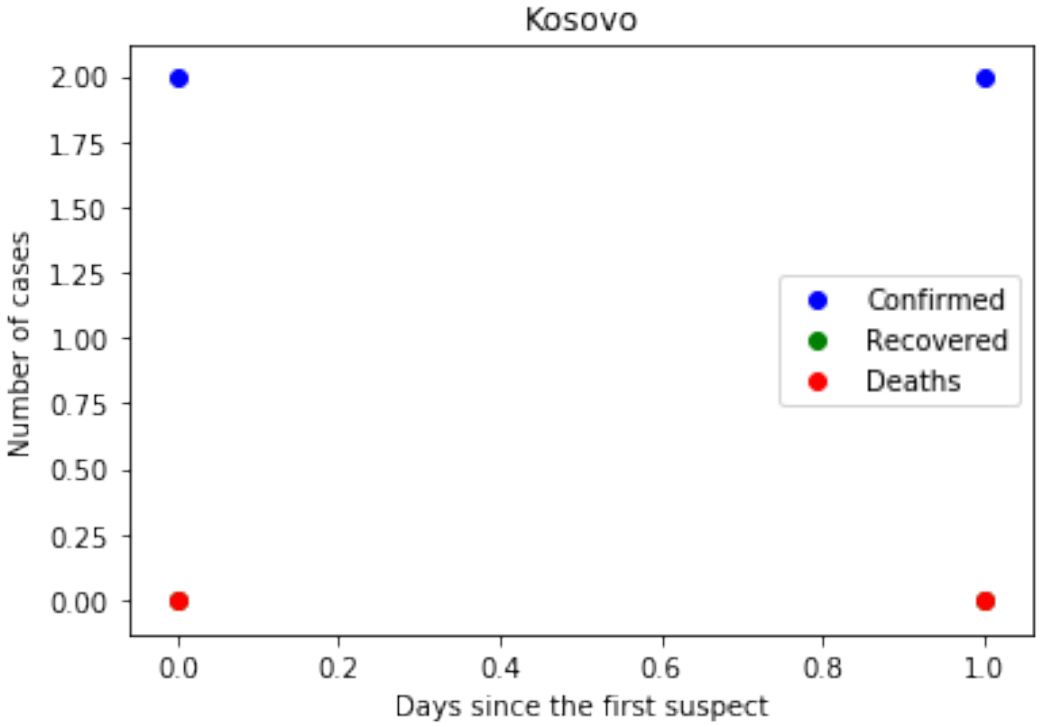

Japan
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
200
400
600
800
0
10
20
30
40
50

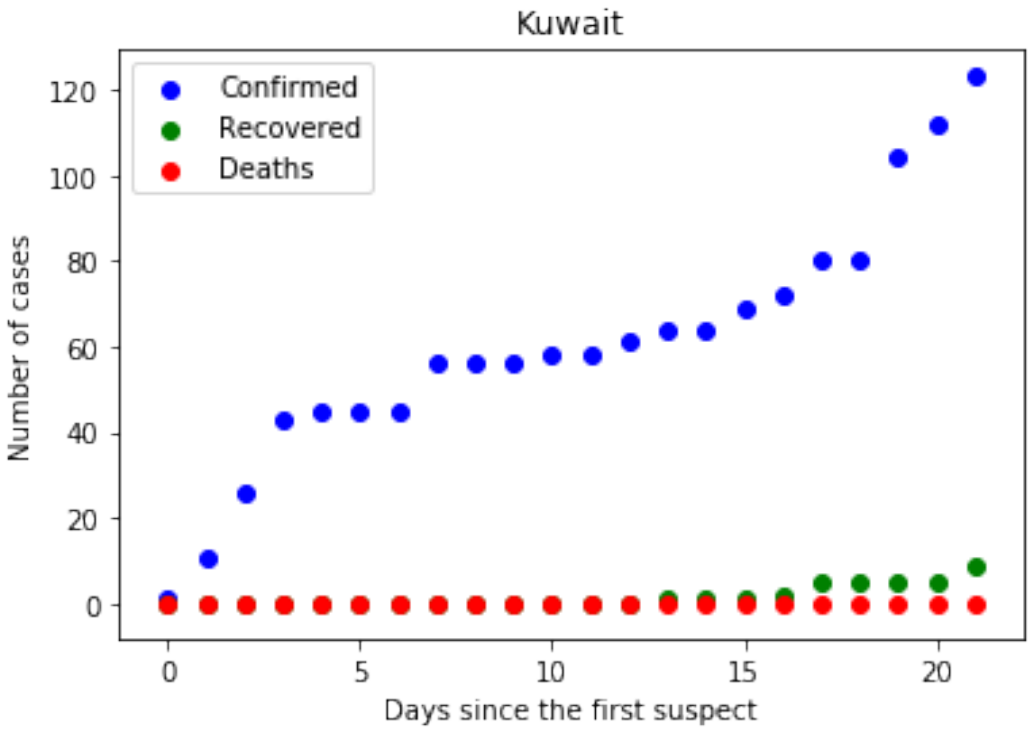

Jersey
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
2.00

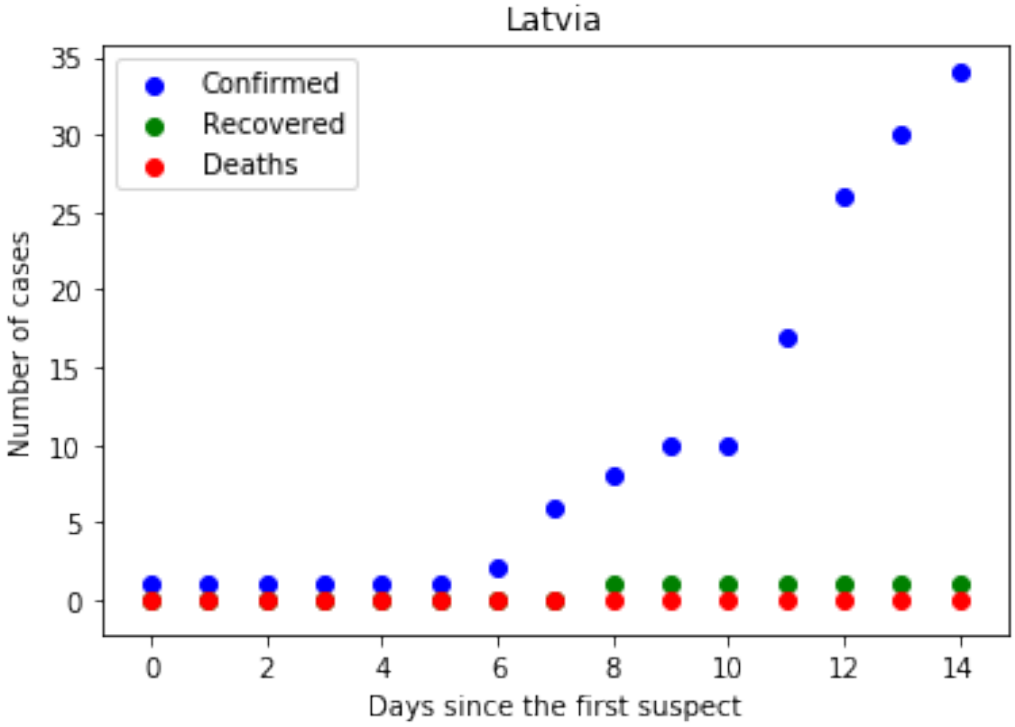

Jordan
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect

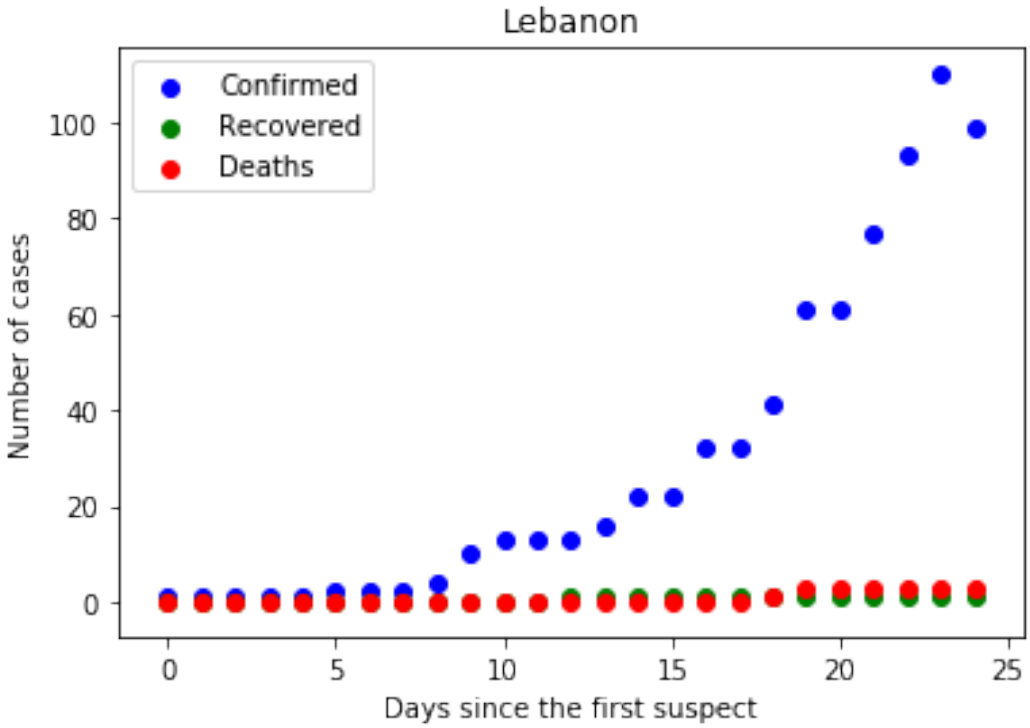

Kazakhstan
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect

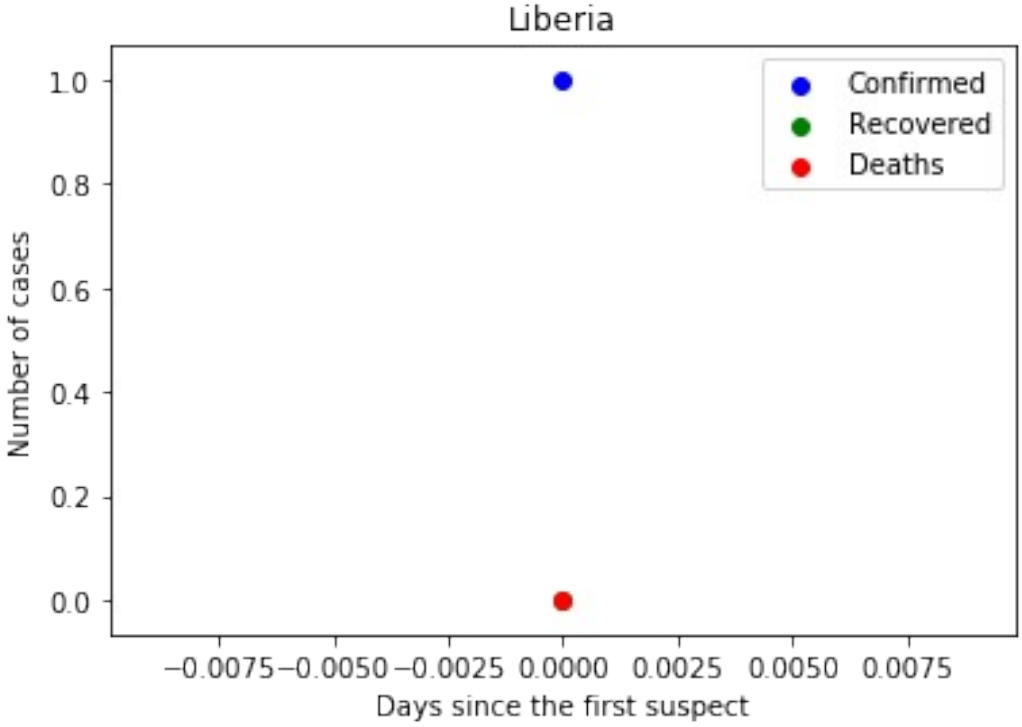

Kenya
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0.0
0.5
1.0
1.5
2.0
2.5
3.0

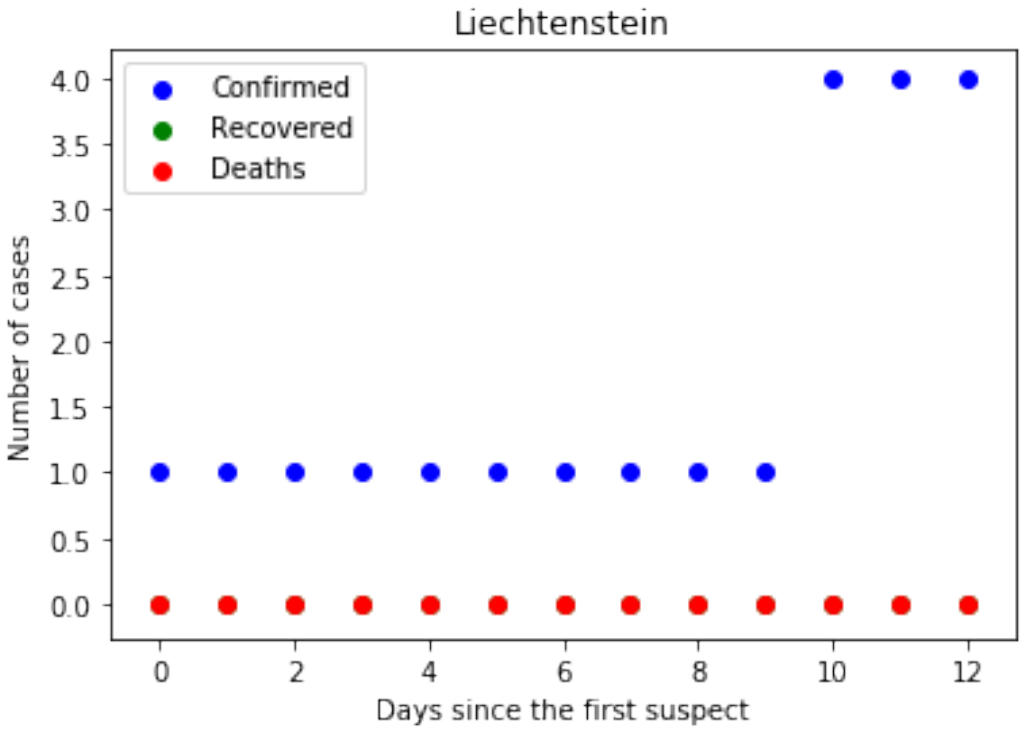

Kosovo
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
2.00
0.0
0.2
0.4
0.6
0.8
1.0

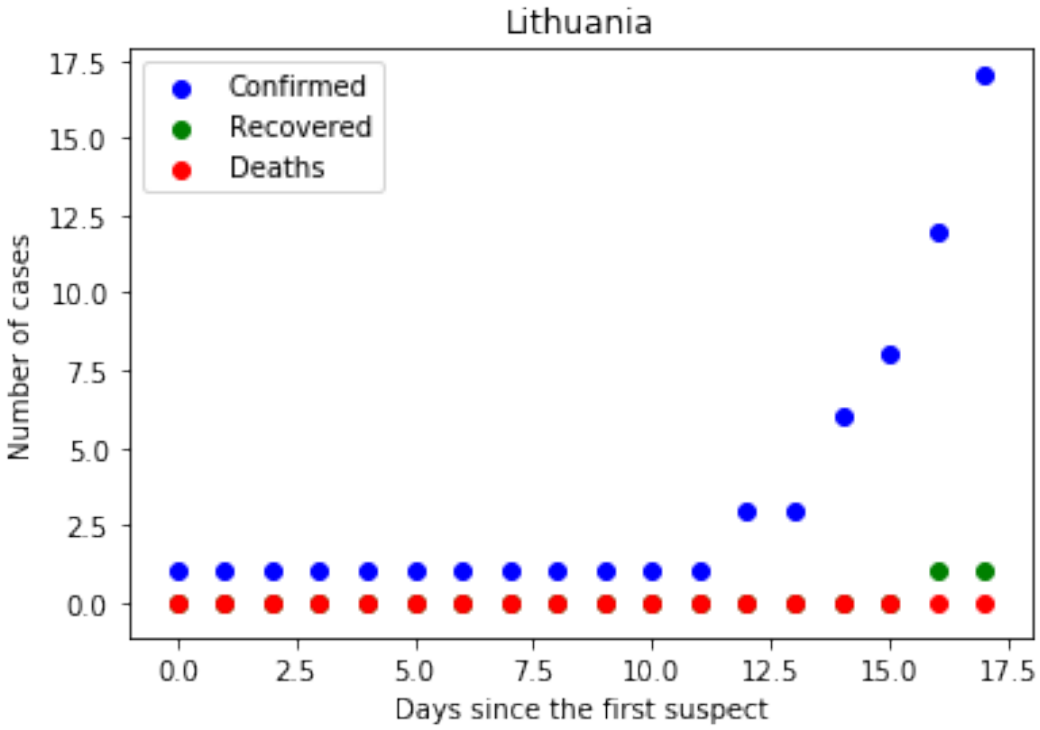

Kuwait
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
20
40
60
80
100
120
0
5
10
15
20

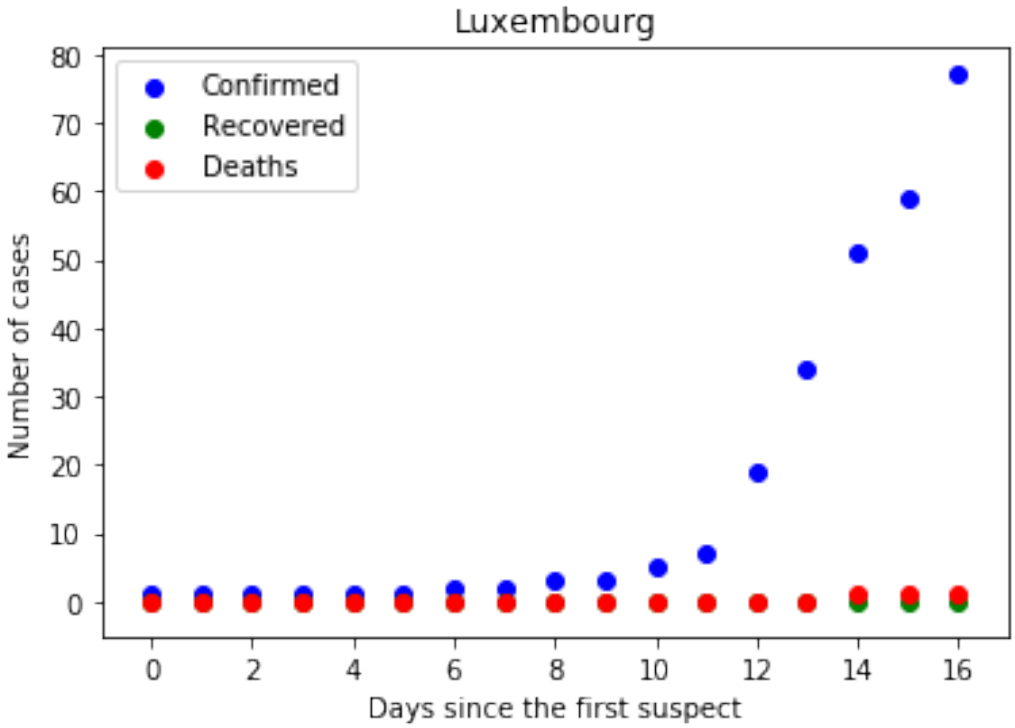

Latvia
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
5
10
15
20
25
30
35
0
2
4
6
8
10
12
14

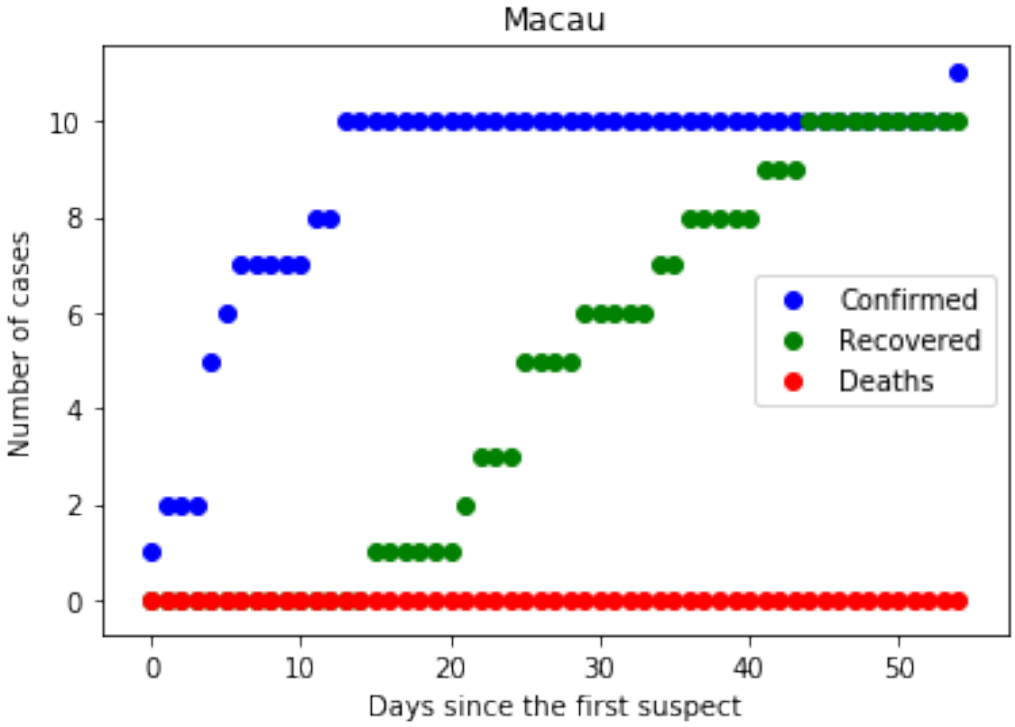

Lebanon
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
20
40
60
80
100
0
5
10
15
20
25

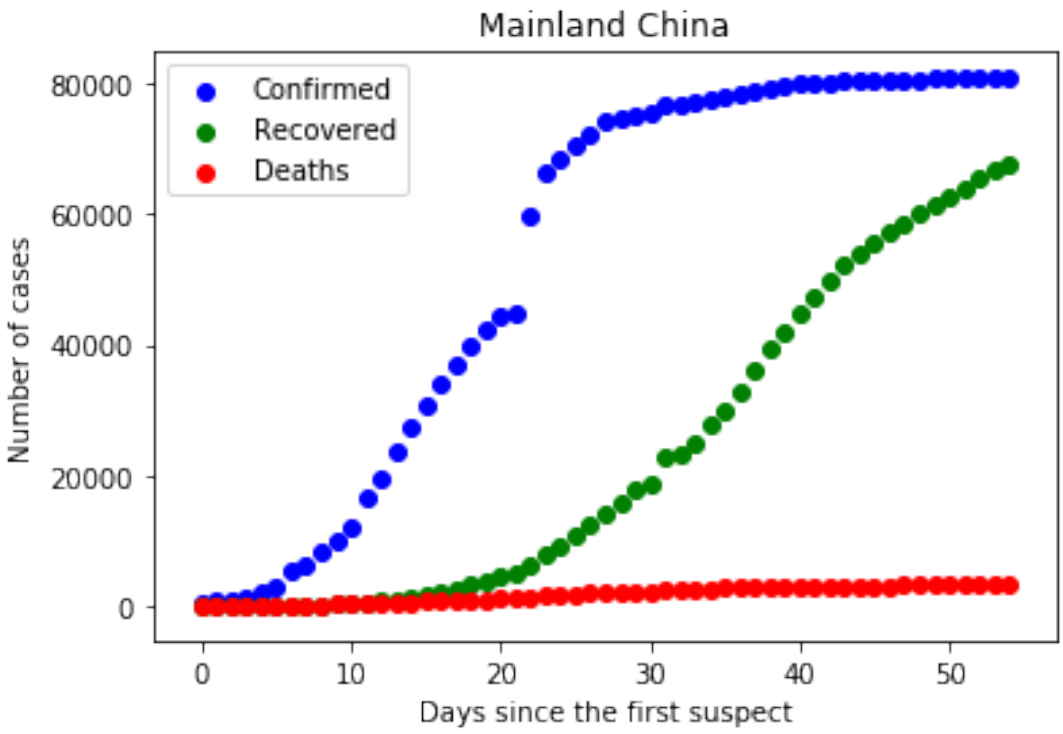

Liberia
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0.0
0.2
0.4
0.6
0.8
1.0
−0.0075
−0.0050
−0.0025
0.0000
0.0025
0.0050
0.0075

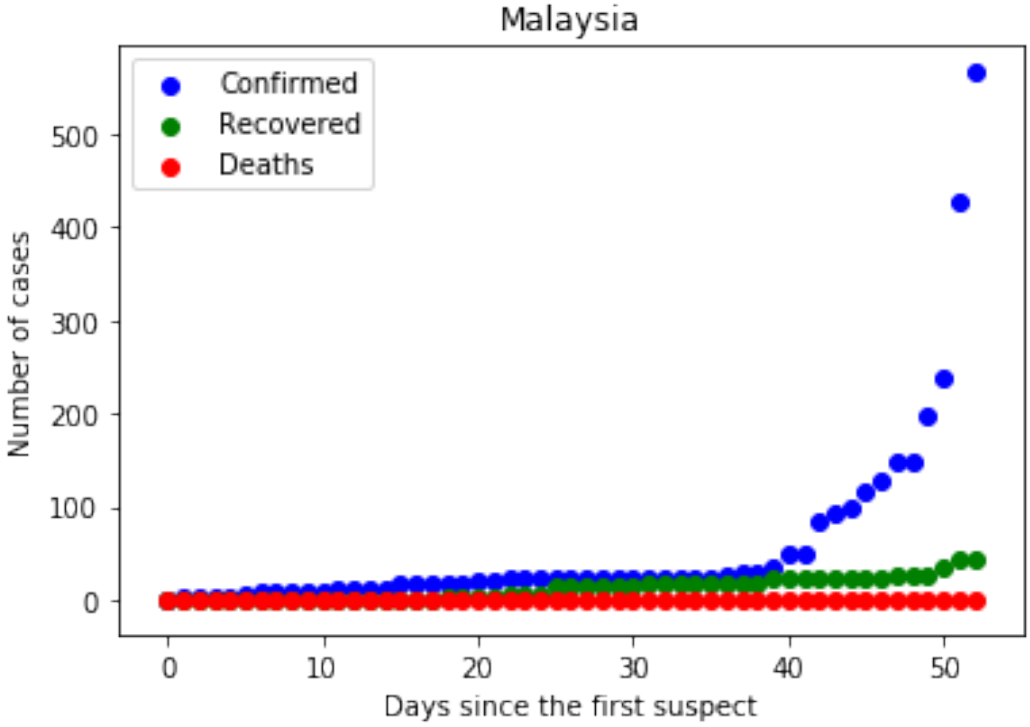

Liechtenstein
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
0
2
4
6
8
10
12

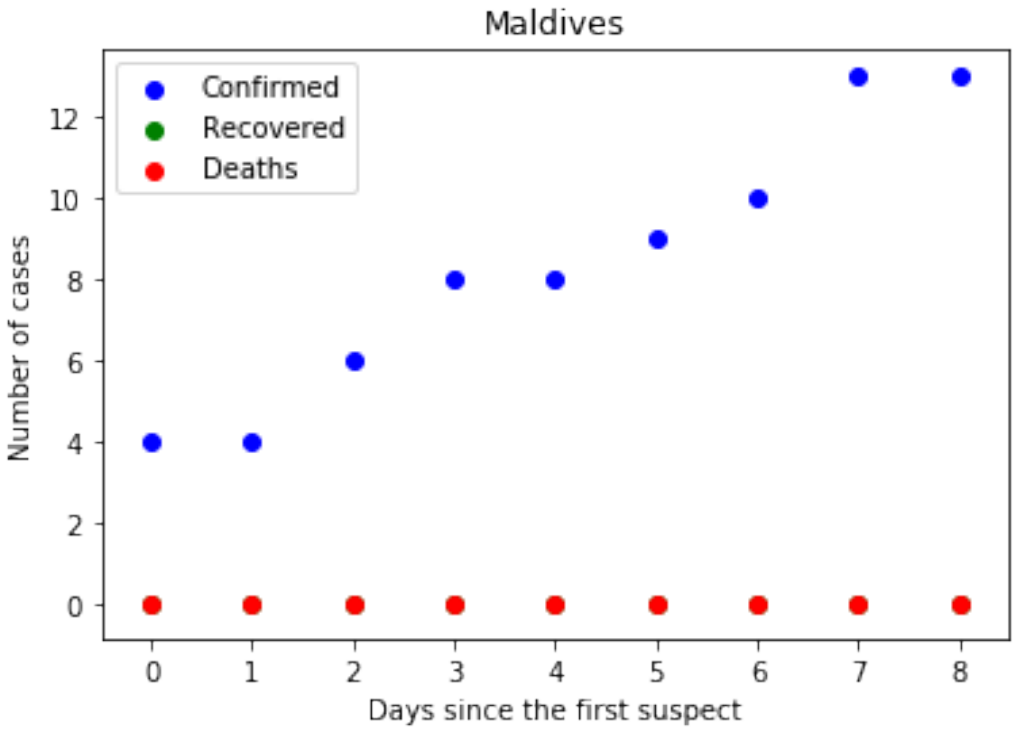

Lithuania
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0.0
2.5
5.0
7.5
10.0
12.5
15.0
17.5

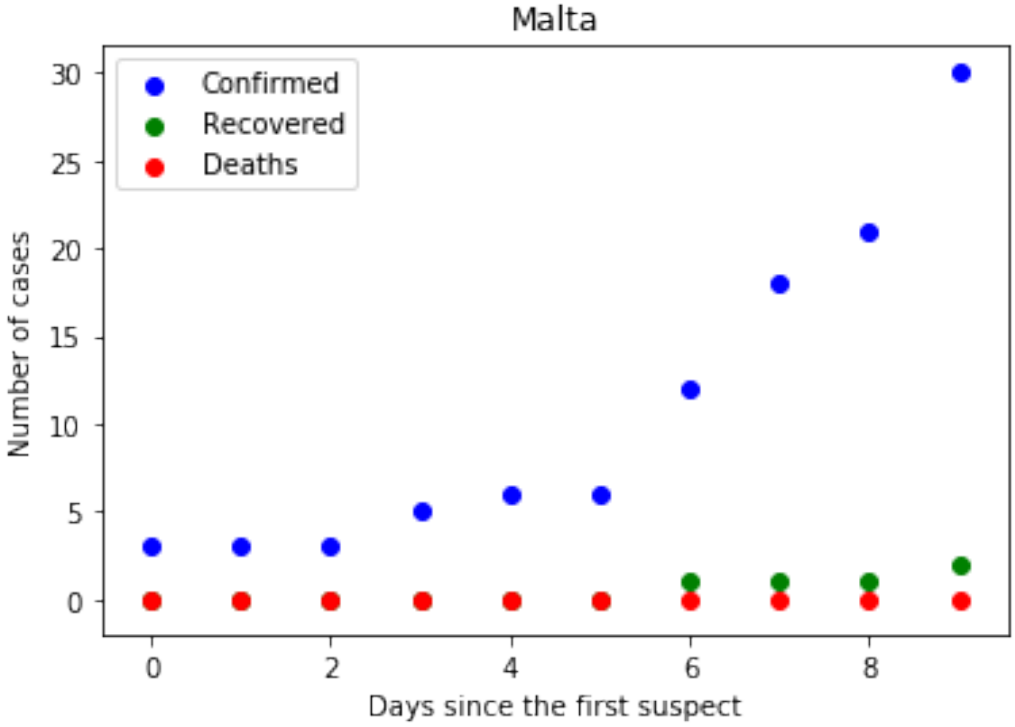

Luxembourg
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
10
20
30
40
50
60
70
80
0
2
4
6
8
10
12
14
16

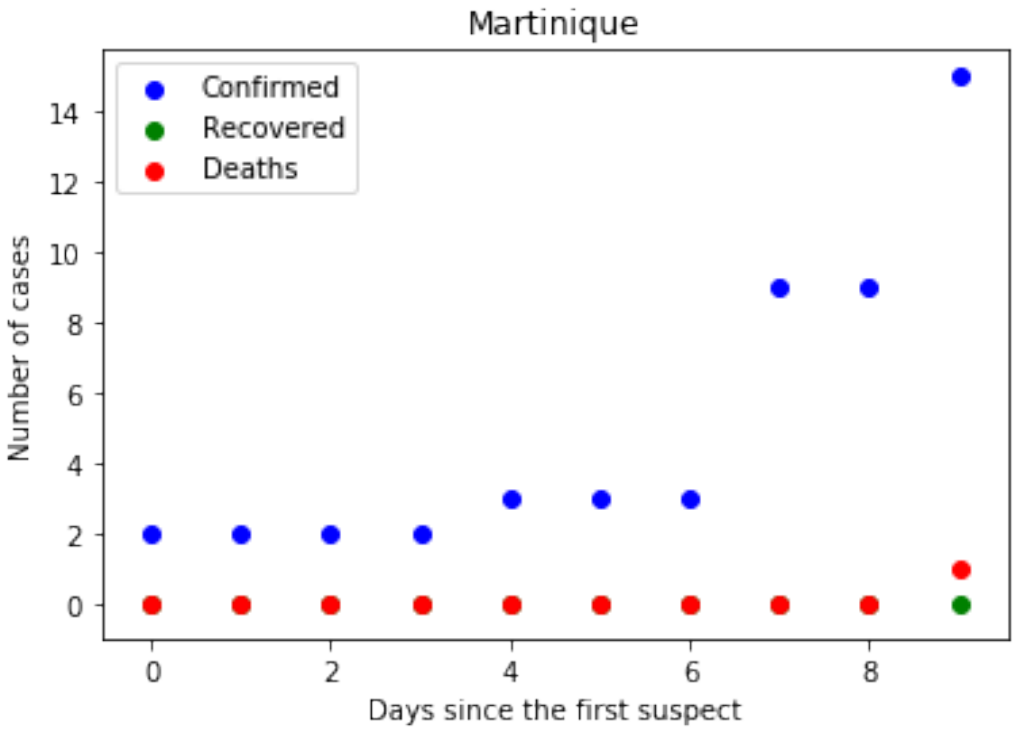

Macau
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
2
4
6
8
10
0
10
20
30
40
50

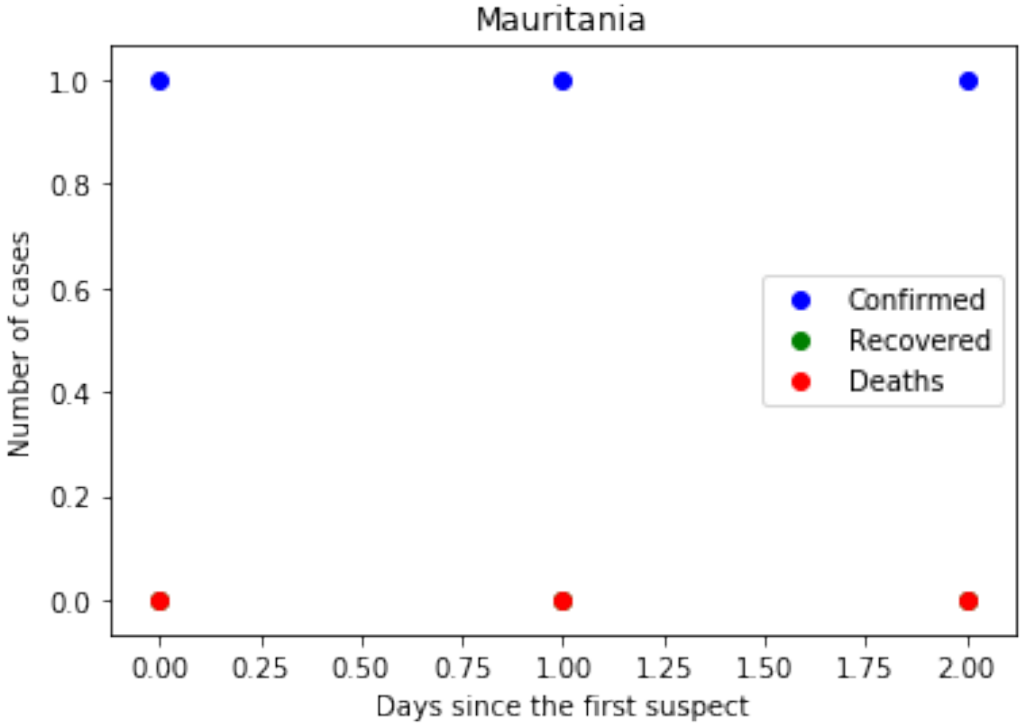

Mainland China
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
20000
40000
60000
80000
0
10
20
30
40
50

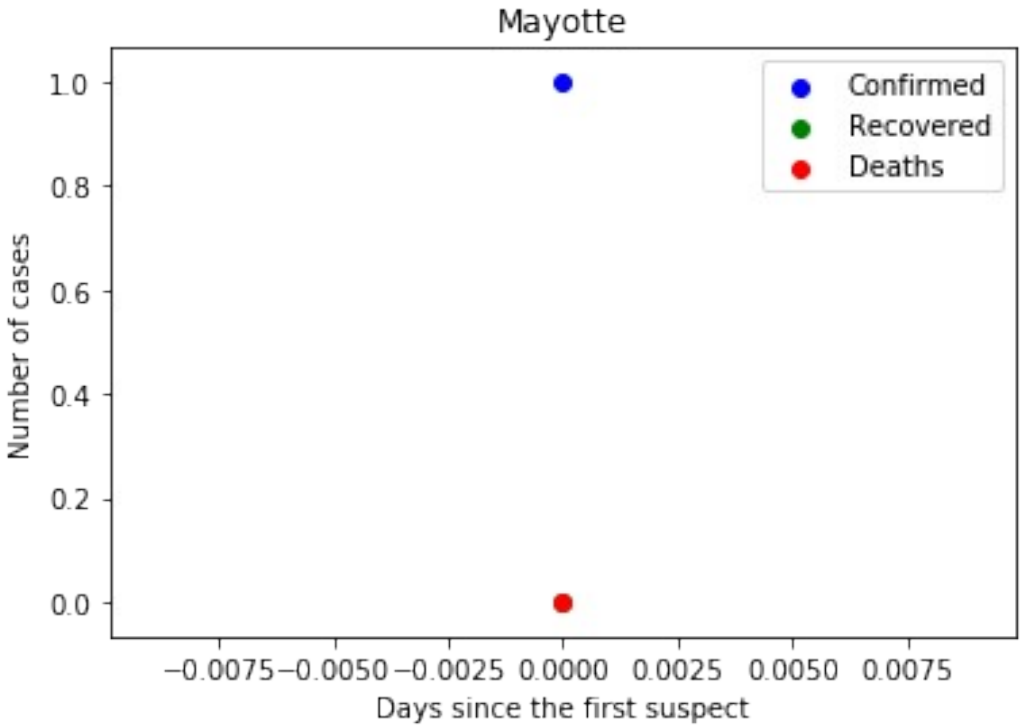

Malaysia
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
100
200
300
400
500
0
10
20
30
40
50

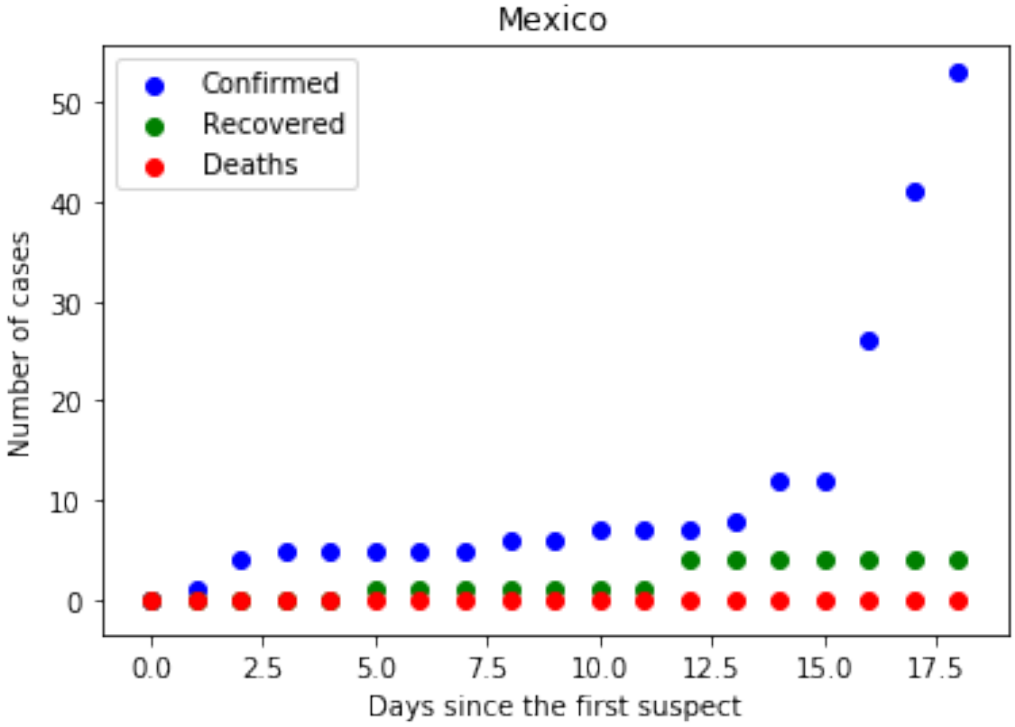

Maldives
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect

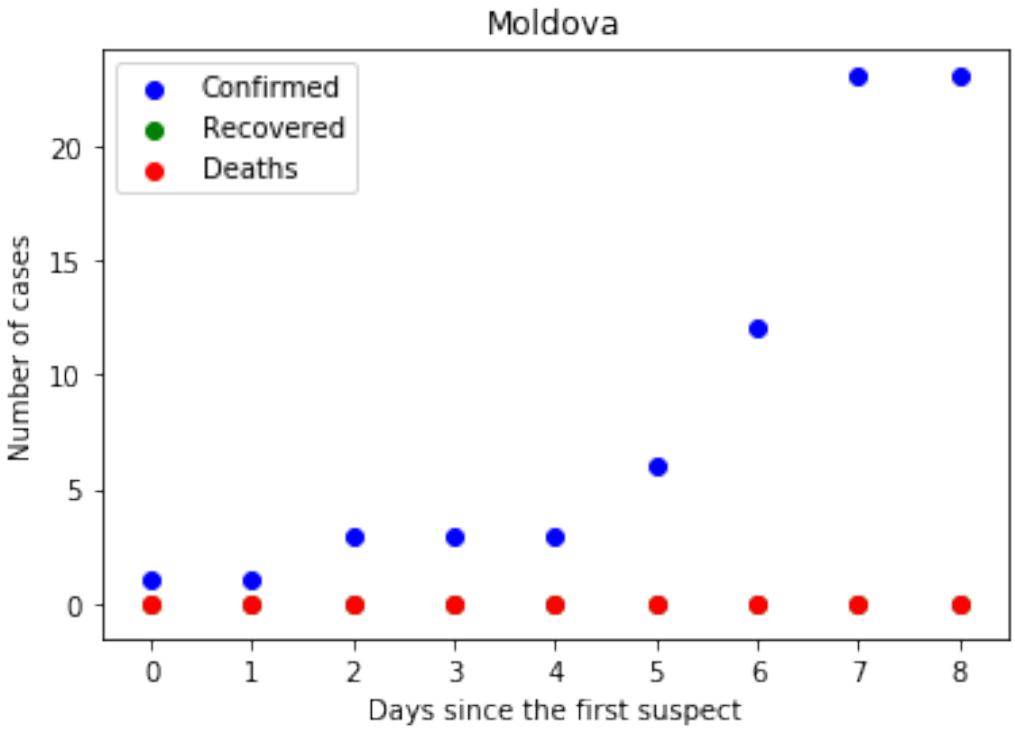

Malta
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect

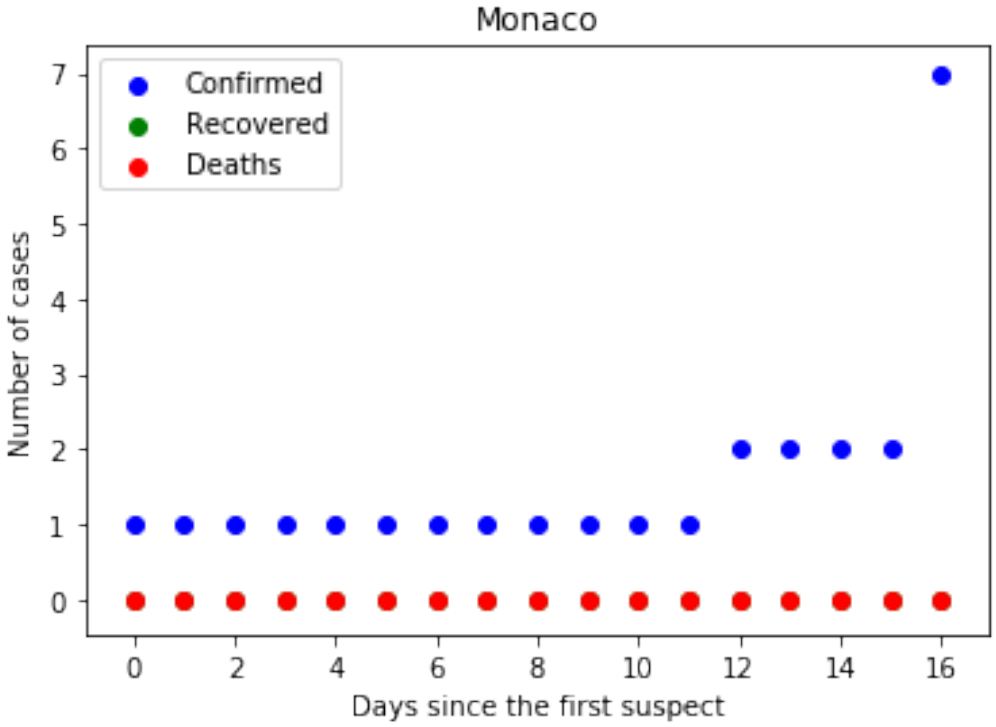

Martinique
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
2
4
6
8
10
12
14

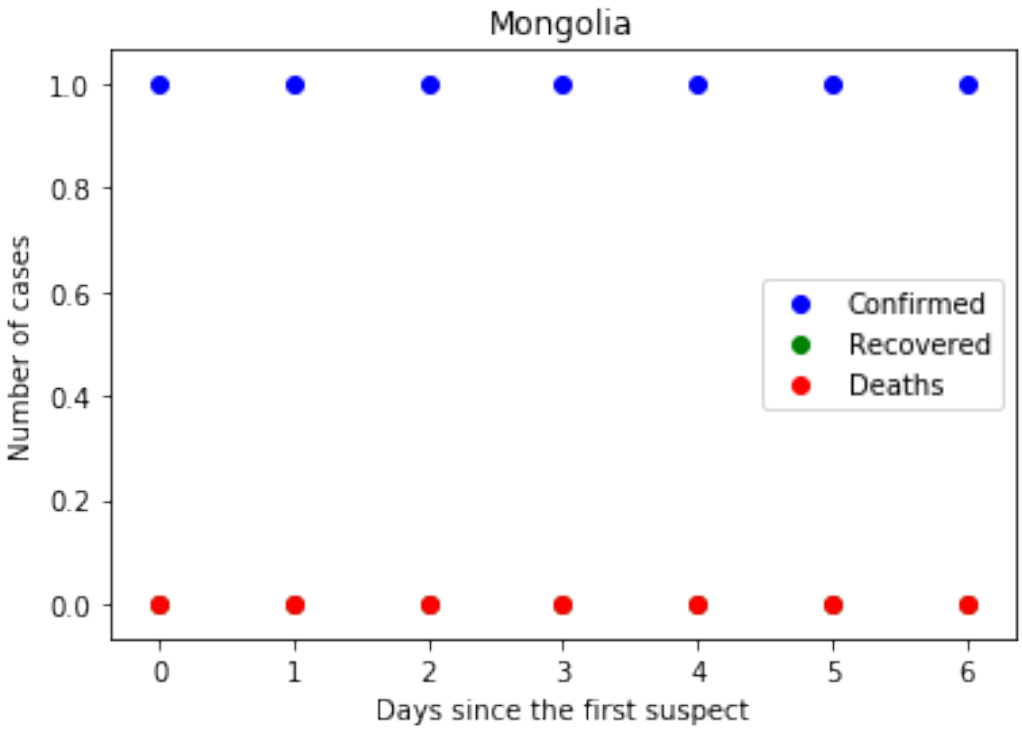

Mauritania
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0.0
0.2
0.4
0.6
0.8
1.0
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
2.00

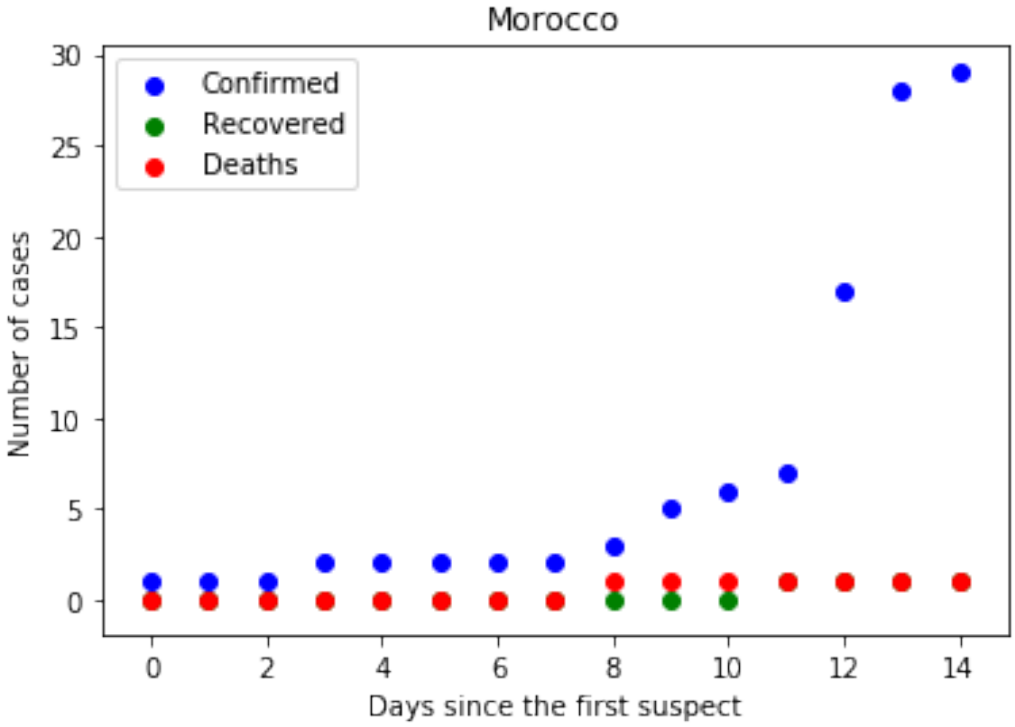

Mayotte
Confirmed
Recovered
Deaths
Number of cases
1.0
0.8
0.6
0.4
0.2
0.0
−0.0075
−0.0050
−0.0025
0.0000
0.0025
0.0050
0.0075
Days since the first suspect

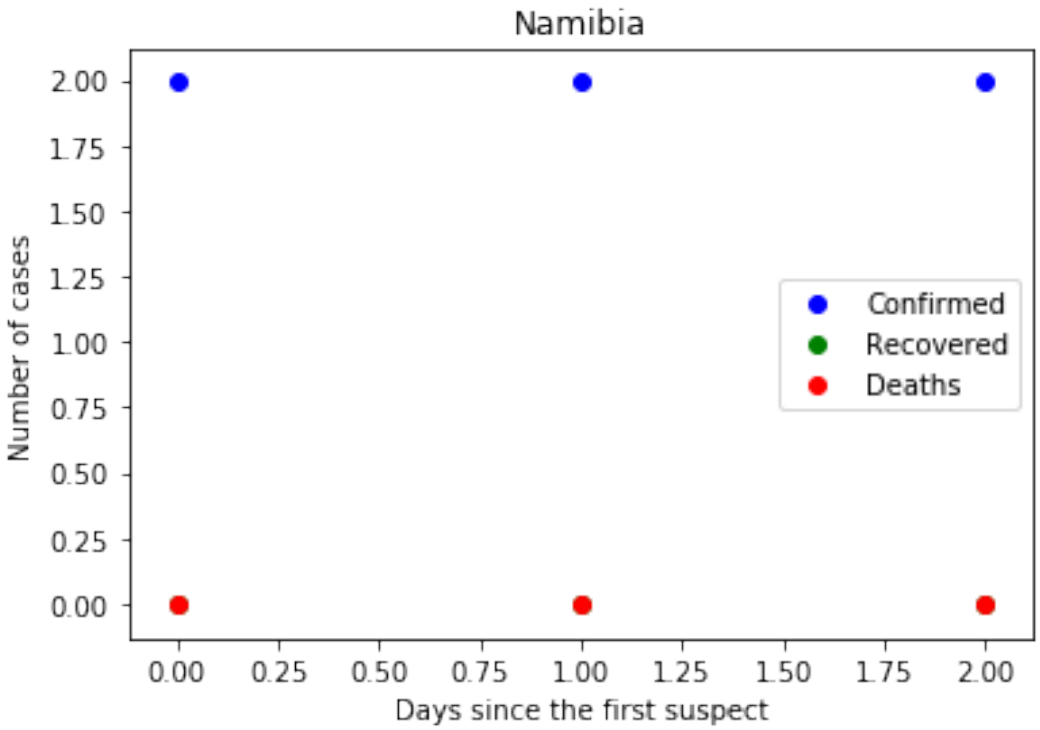

Mexico
Confirmed
Recovered
Deaths
Number of cases
50
40
30
20
10
0
0.0
2.5
5.0
7.5
10.0
12.5
15.0
17.5
Days since the first suspect

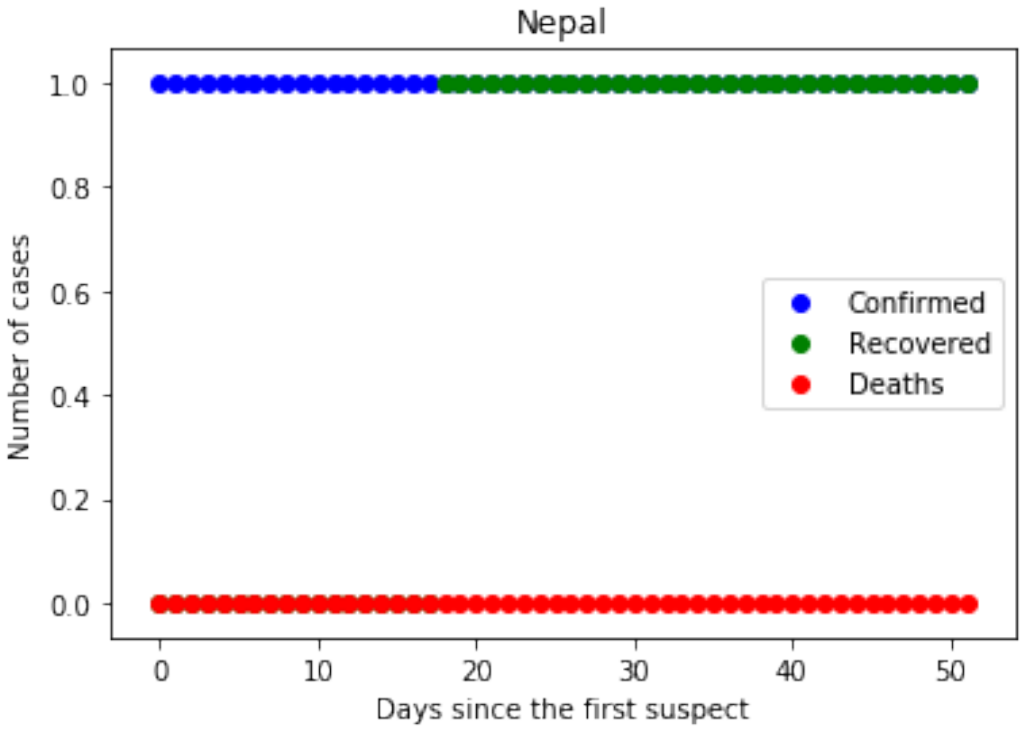

Moldova
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect

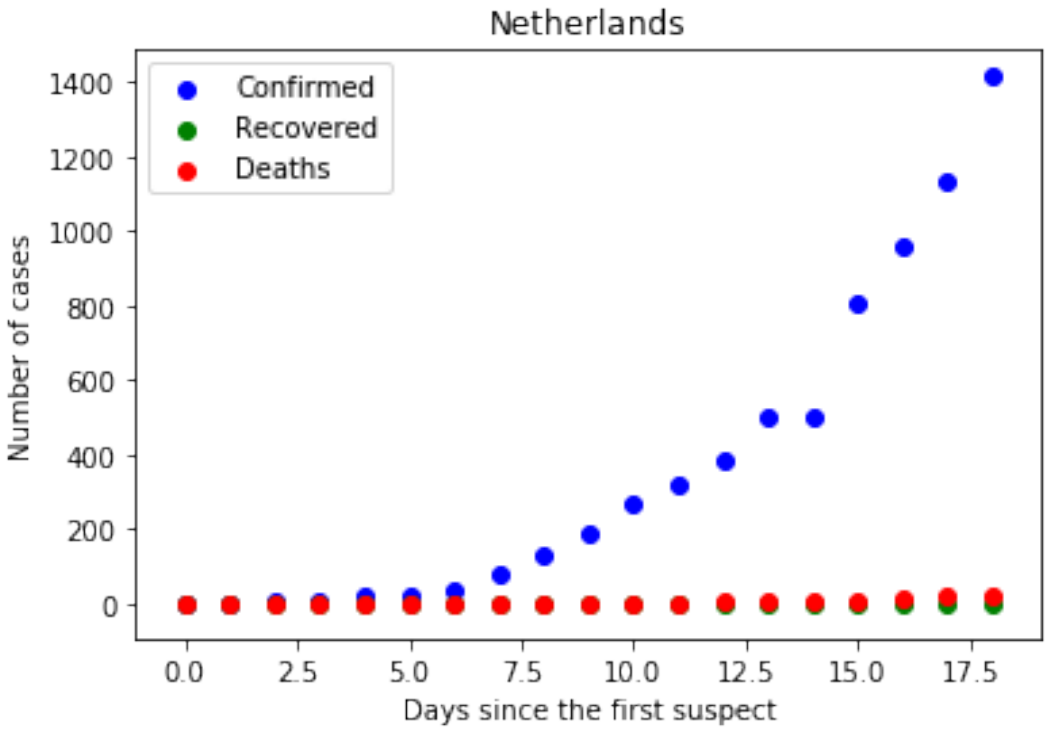

Monaco
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect

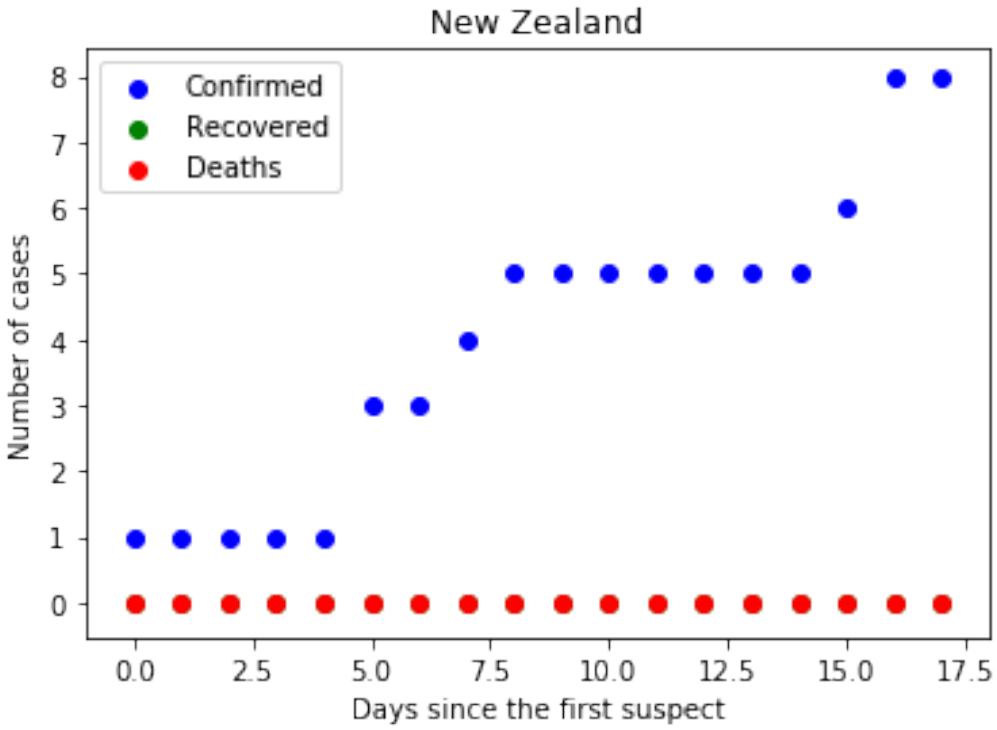

Mongolia
Number of cases
Days since the first suspect
Confirmed
Recovered
Deaths
0.0
0.2
0.4
0.6
0.8
1.0
0
1
2
3
4
5
6

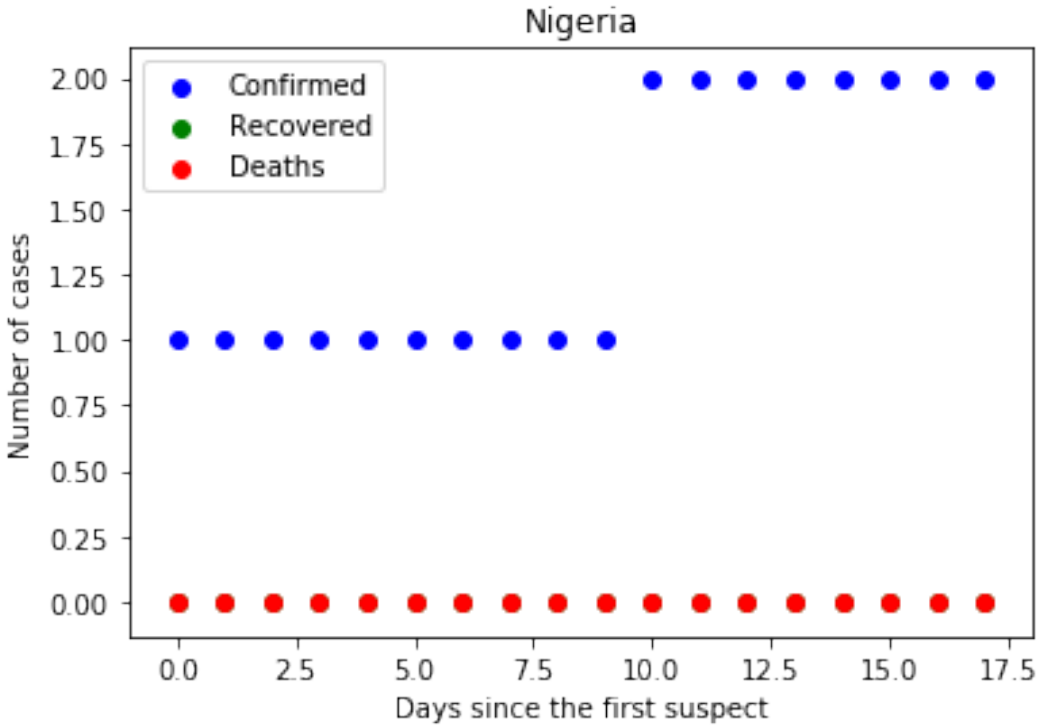

Morocco
Number of cases
Days since the first suspect
Confirmed
Recovered
Deaths
0
5
10
15
20
25
30
0
2
4
6
8
10
12
14

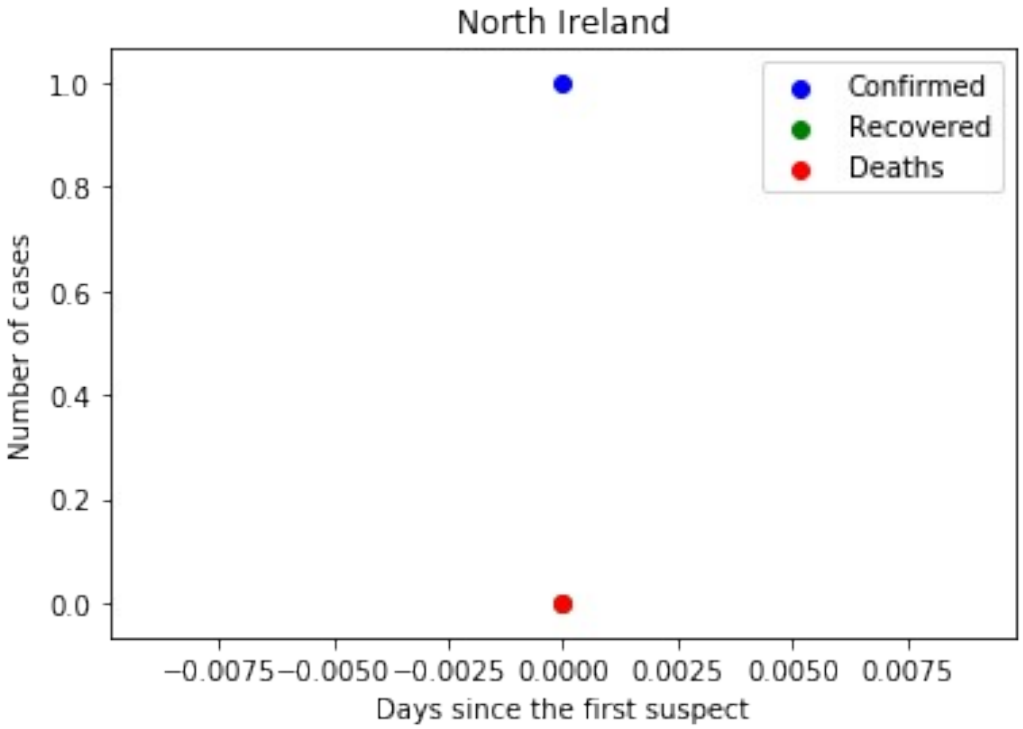

Namibia
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0.00
Number of cases
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
2.00
Days since the first suspect
Confirmed
Recovered
Deaths

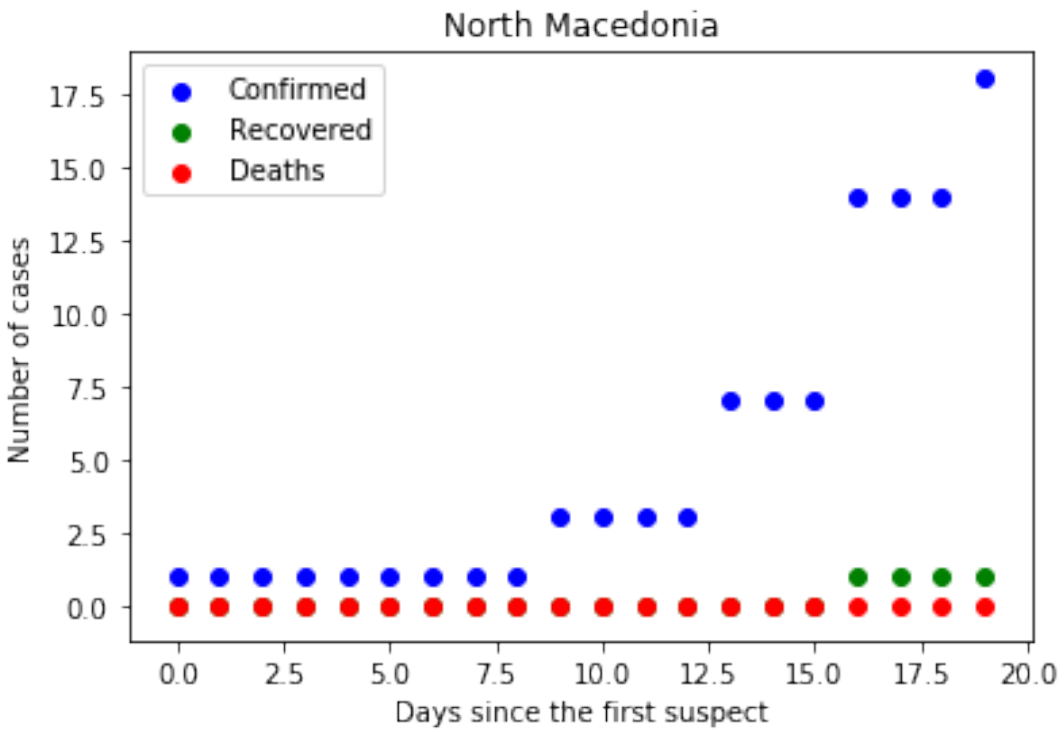

Nepal
1.0
0.8
0.6
0.4
0.2
0.0
Number of cases
0
10
20
30
40
50
Days since the first suspect
Confirmed
Recovered
Deaths

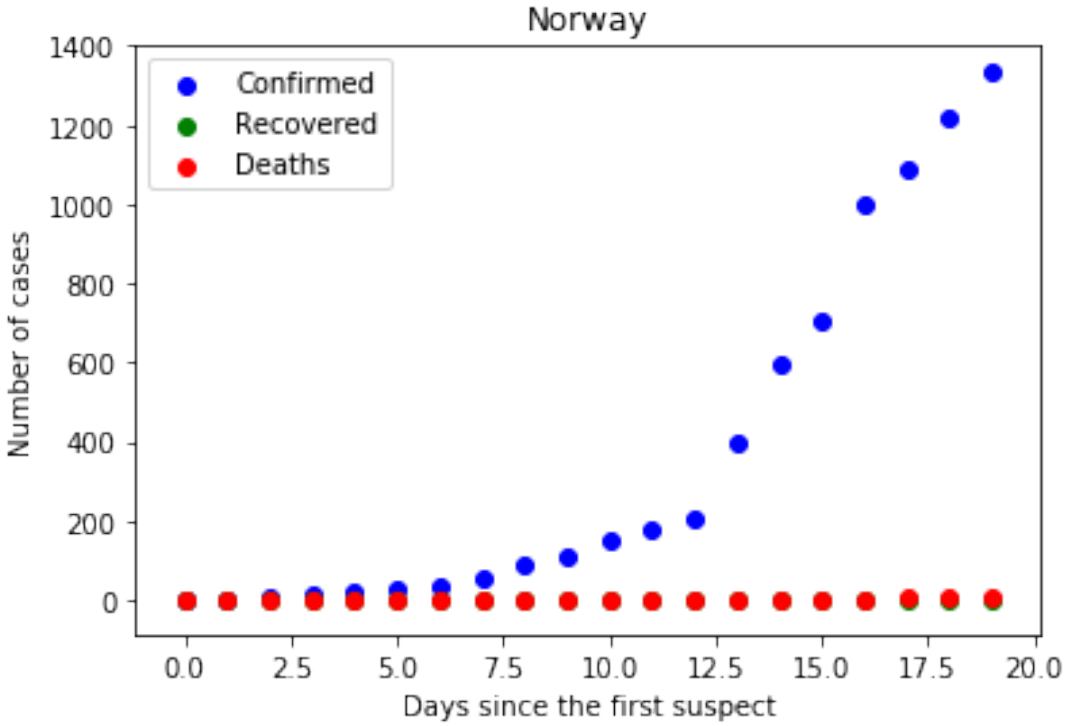

Netherlands
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
200
400
600
800
1000
1200
1400
0.0
2.5
5.0
7.5
10.0
12.5
15.0
17.5

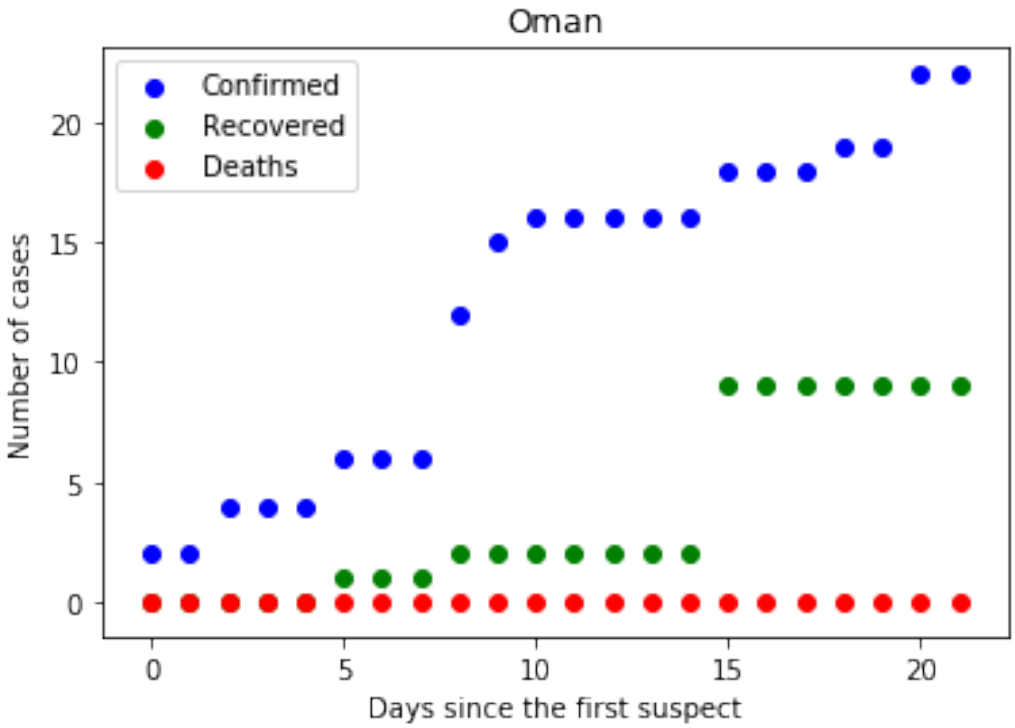

New Zealand
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
1
2
3
4
5
6
7
8
0.0
2.5
5.0
7.5
10.0
12.5
15.0
17.5

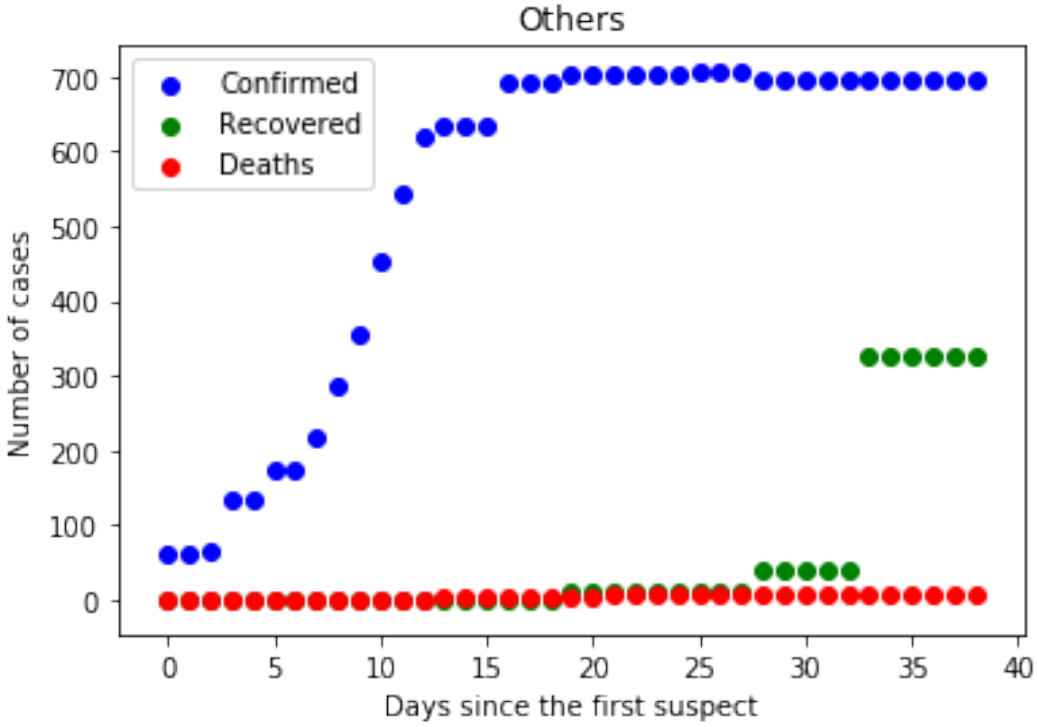

Nigeria
Confirmed
Recovered
Deaths
Number of cases
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0.00
0.0
2.5
5.0
7.5
10.0
12.5
15.0
17.5
Days since the first suspect

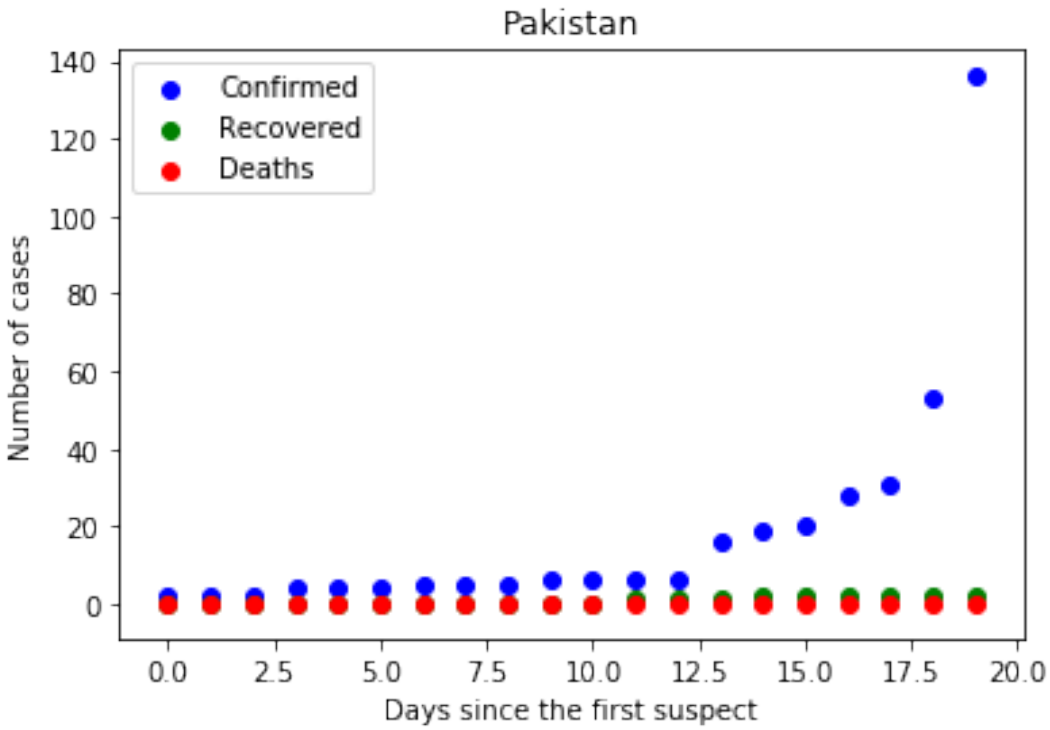

North Ireland
Confirmed
Recovered
Deaths
Number of cases
1.0
0.8
0.6
0.4
0.2
0.0
−0.0075
−0.0050
−0.0025
0.0000
0.0025
0.0050
0.0075
Days since the first suspect

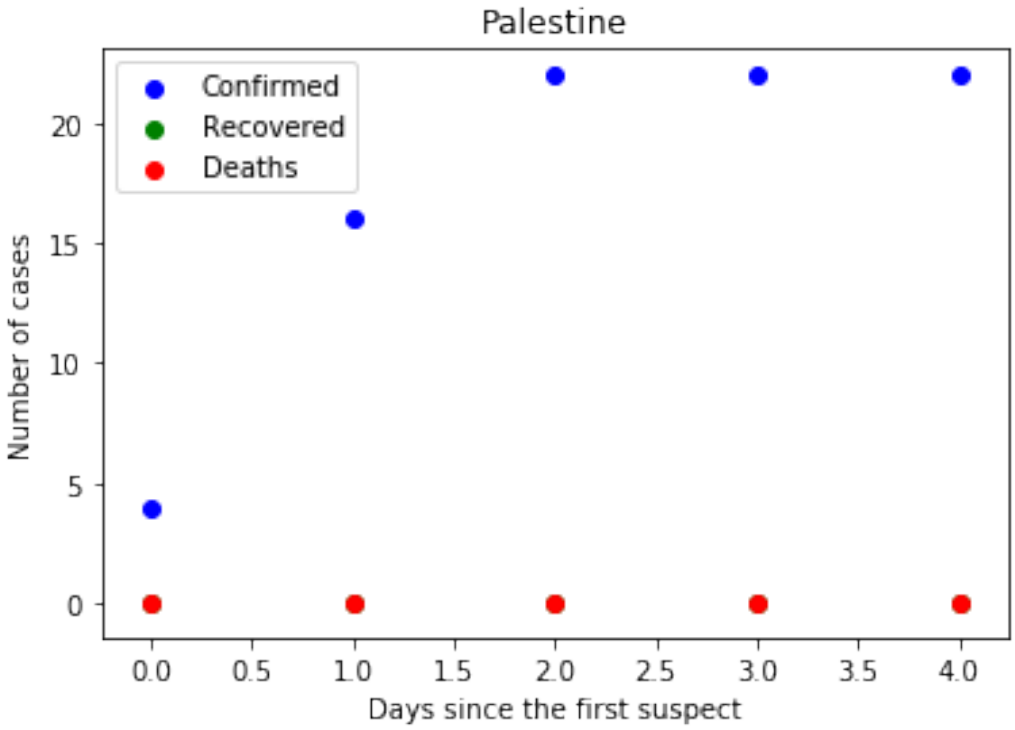

North Macedonia
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0.0
2.5
5.0
7.5
10.0
12.5
15.0
17.5
20.0

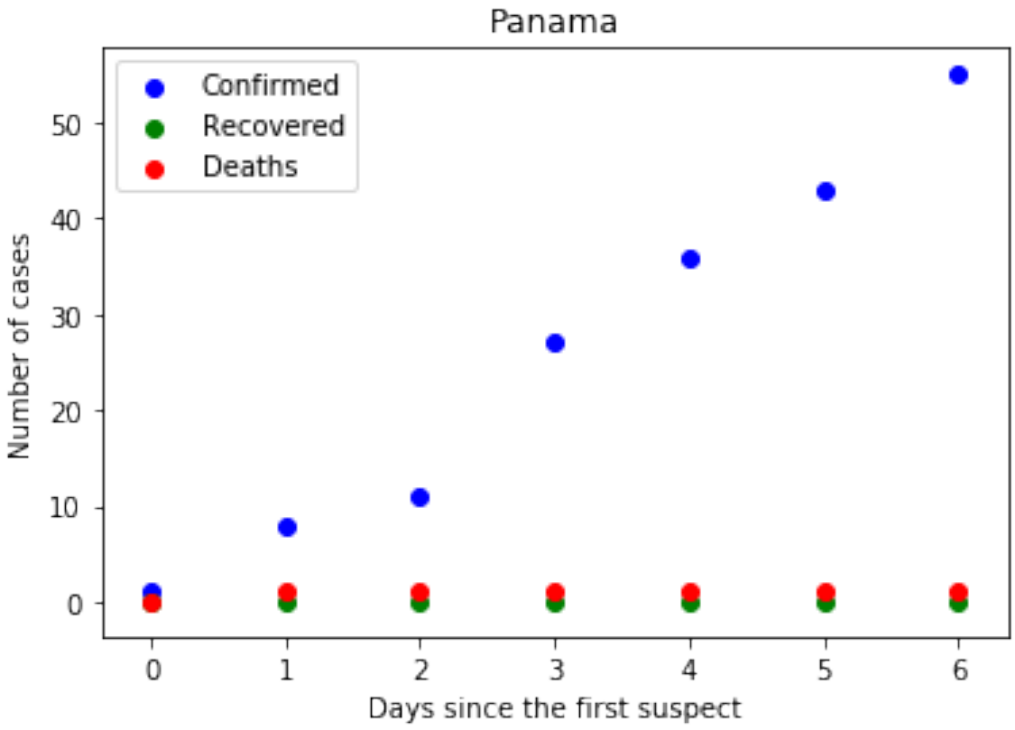

Norway
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
200
400
600
800
1000
1200
1400
0.0
2.5
5.0
7.5
10.0
12.5
15.0
17.5
20.0

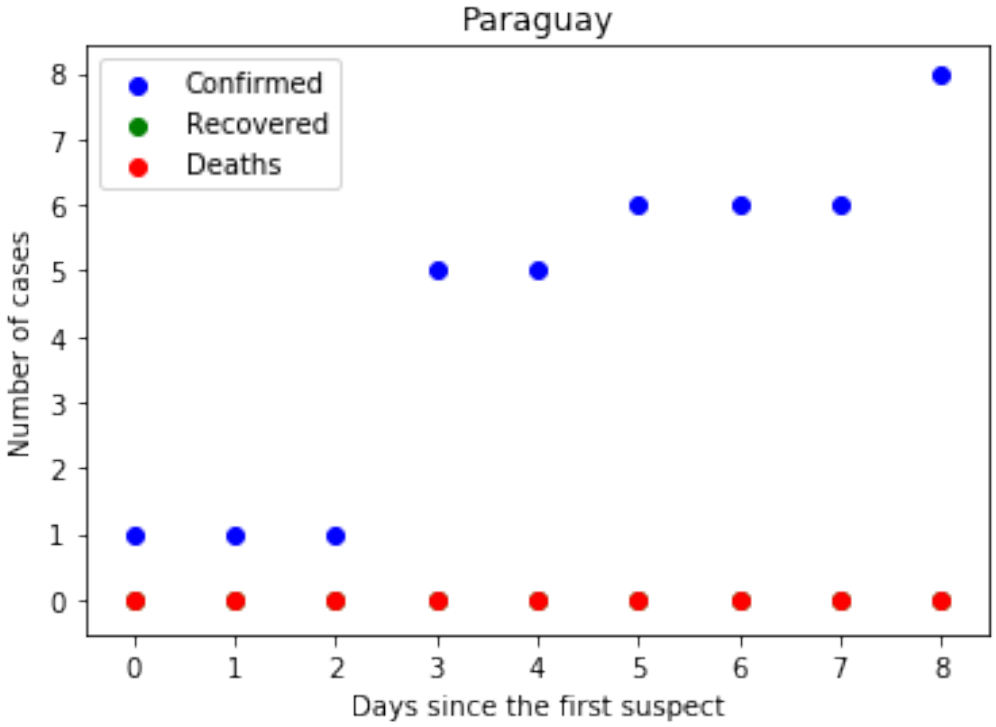

Oman
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
5
10
15
20

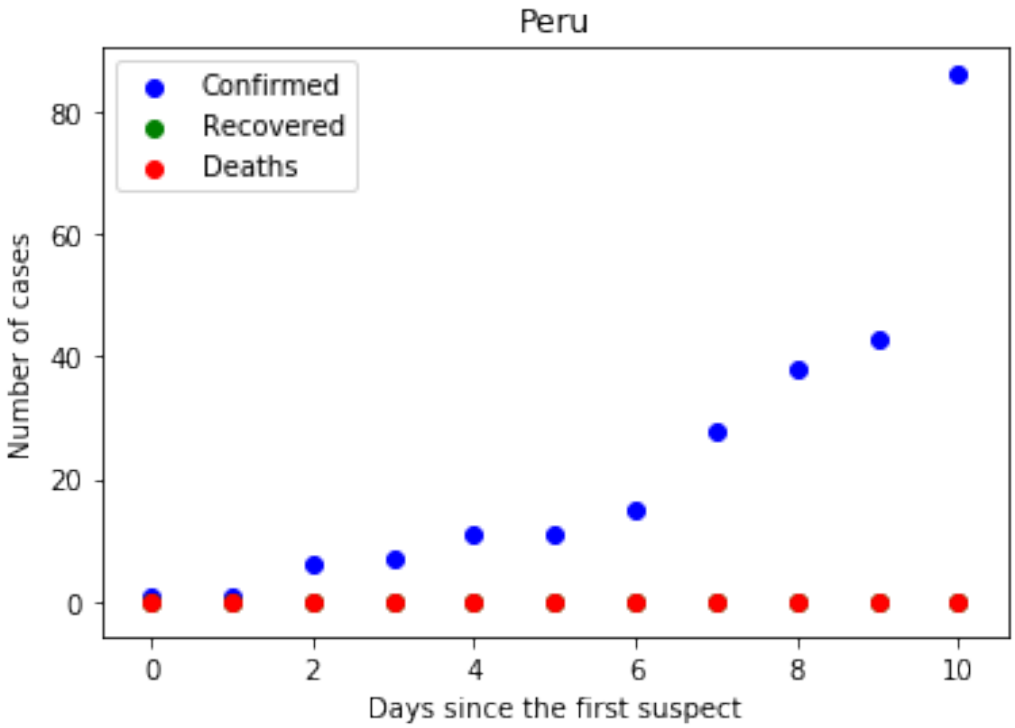

Others
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
100
200
300
400
500
600
700
0
5
10
15
20
25
30
35
40

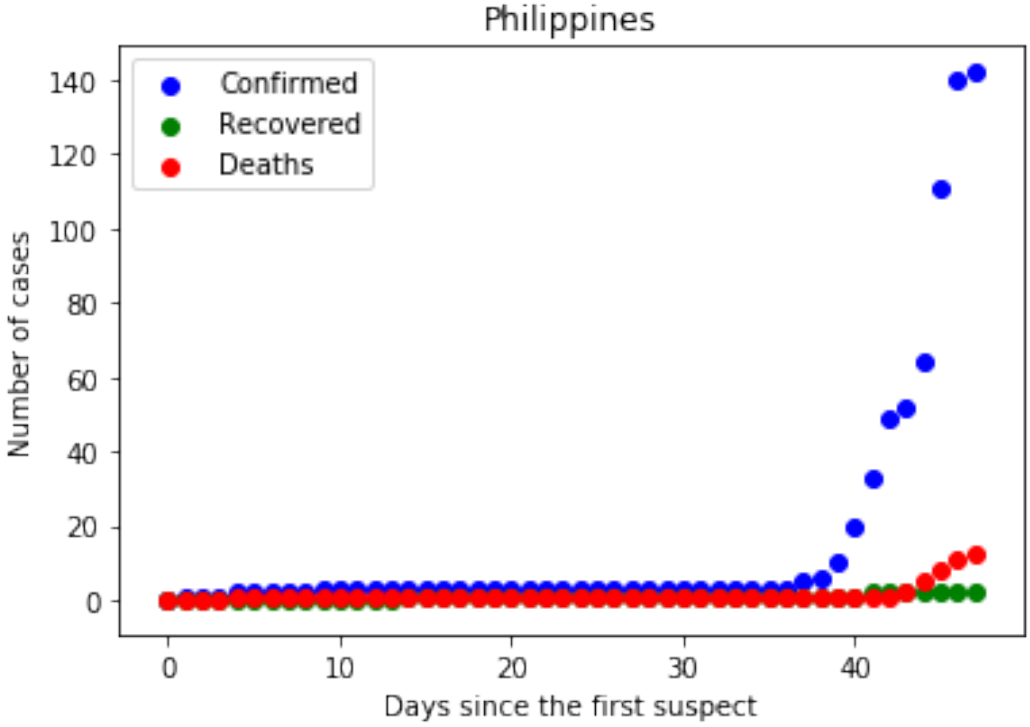

Pakistan
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
20
40
60
80
100
120
140
0.0
2.5
5.0
7.5
10.0
12.5
15.0
17.5
20.0

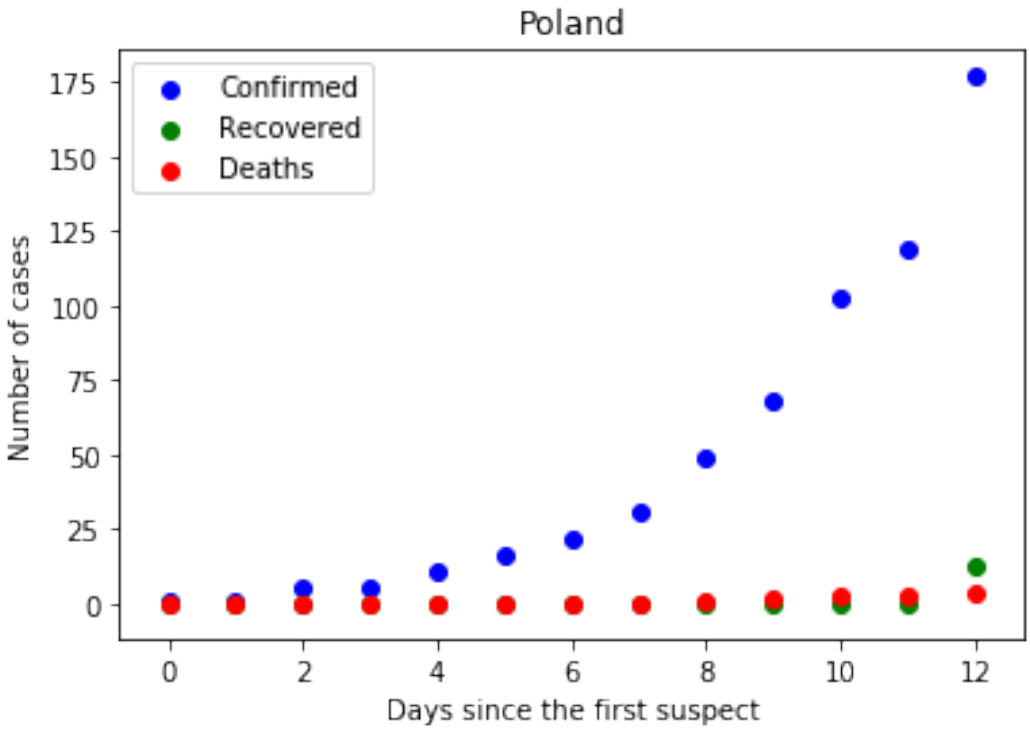

Palestine
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
5
10
15
20
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0

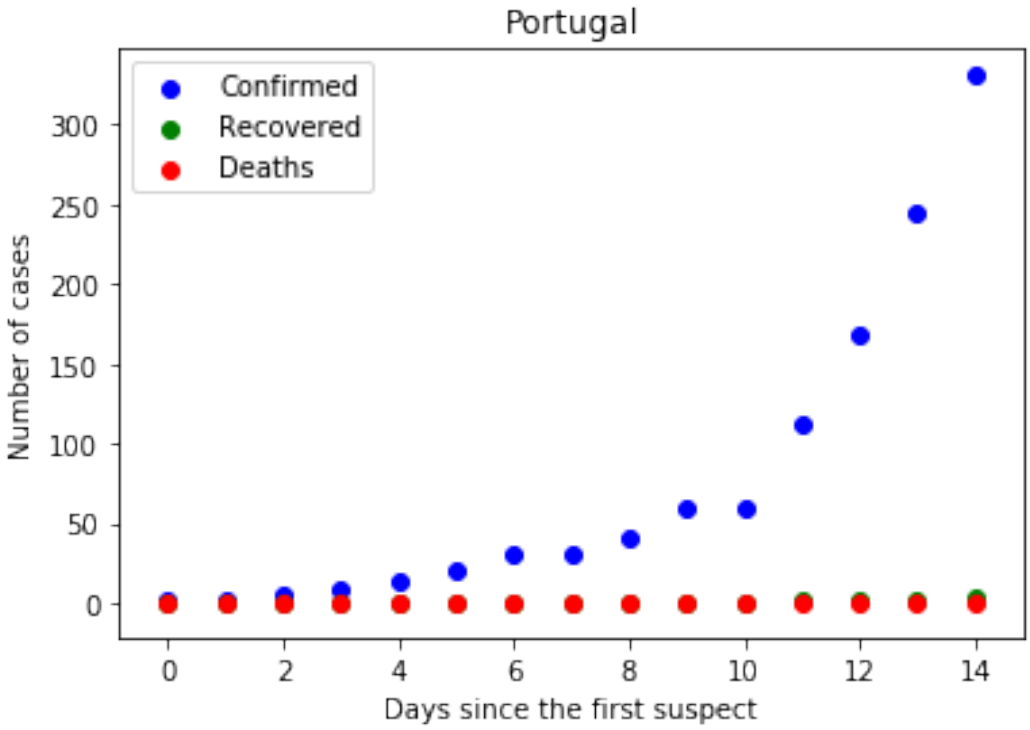

Panama
Confirmed
Recovered
Deaths
Number of cases
0
10
20
30
40
50
0
1
2
3
4
5
6
Days since the first suspect

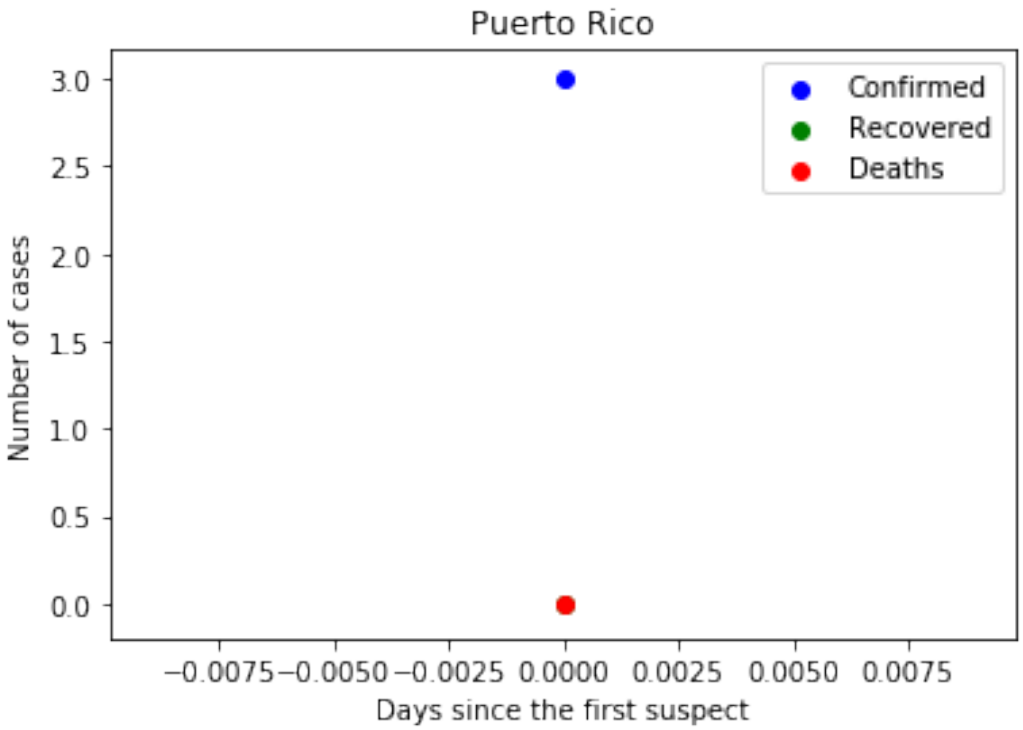

Paraguay
Confirmed
Recovered
Deaths
Number of cases
0
1
2
3
4
5
6
7
8
0
1
2
3
4
5
6
7
8
Days since the first suspect

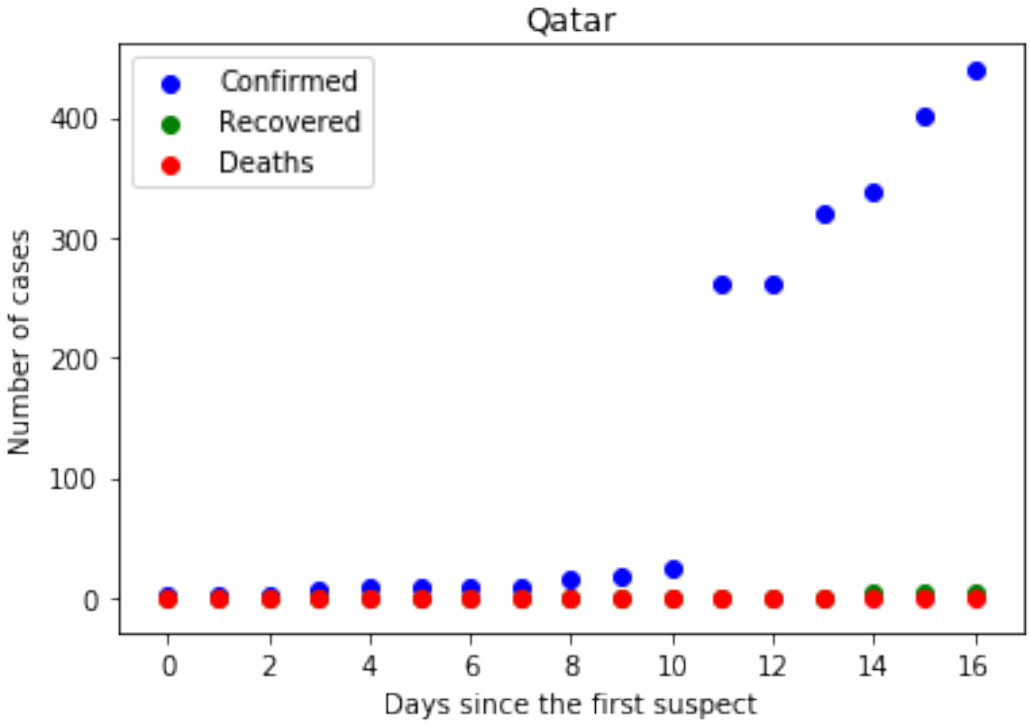

Peru
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
20
40
60
80
0
2
4
6
8
10

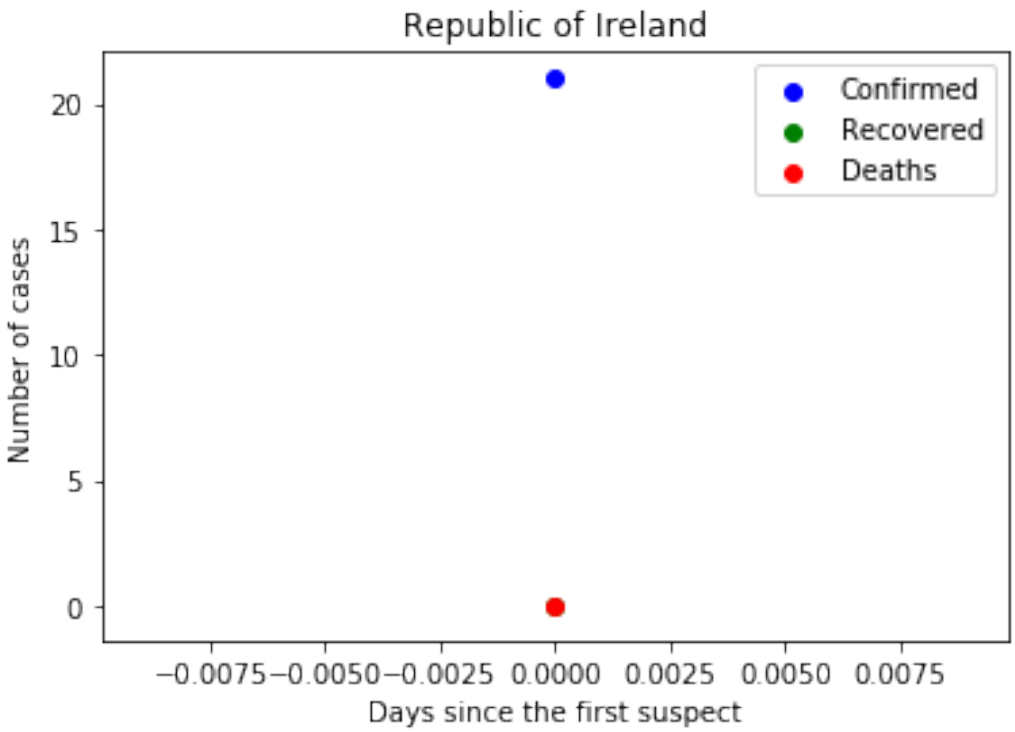

Philippines
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
20
40
60
80
100
120
140
0
10
20
30
40

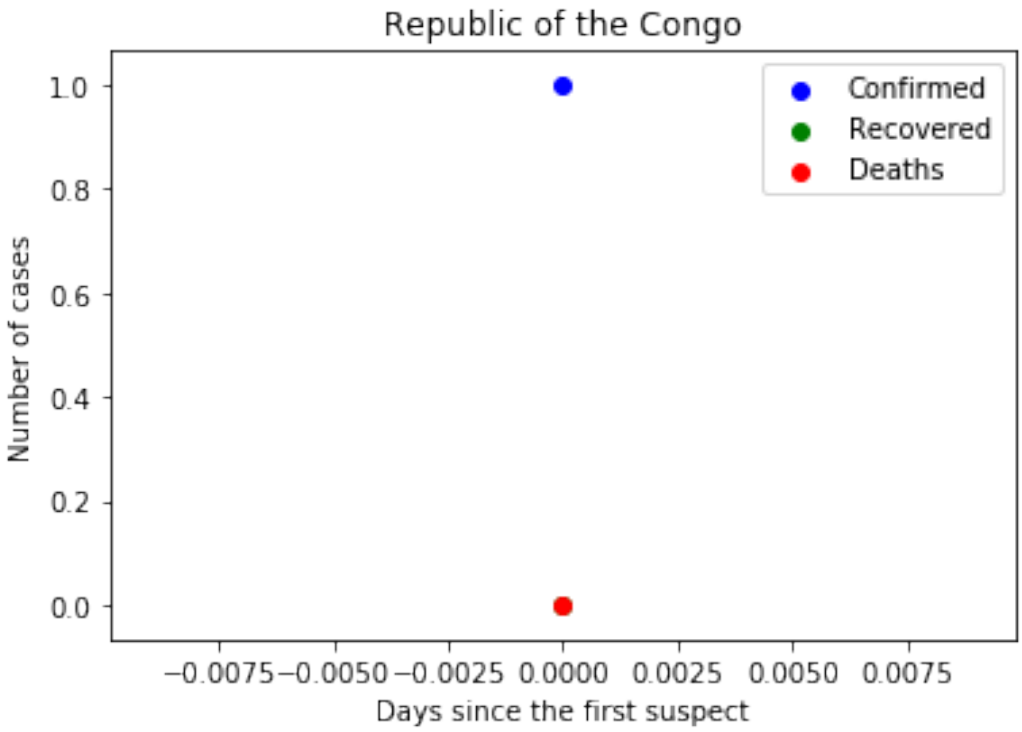

Poland
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
25
50
75
100
125
150
175
0
2
4
6
8
10
12

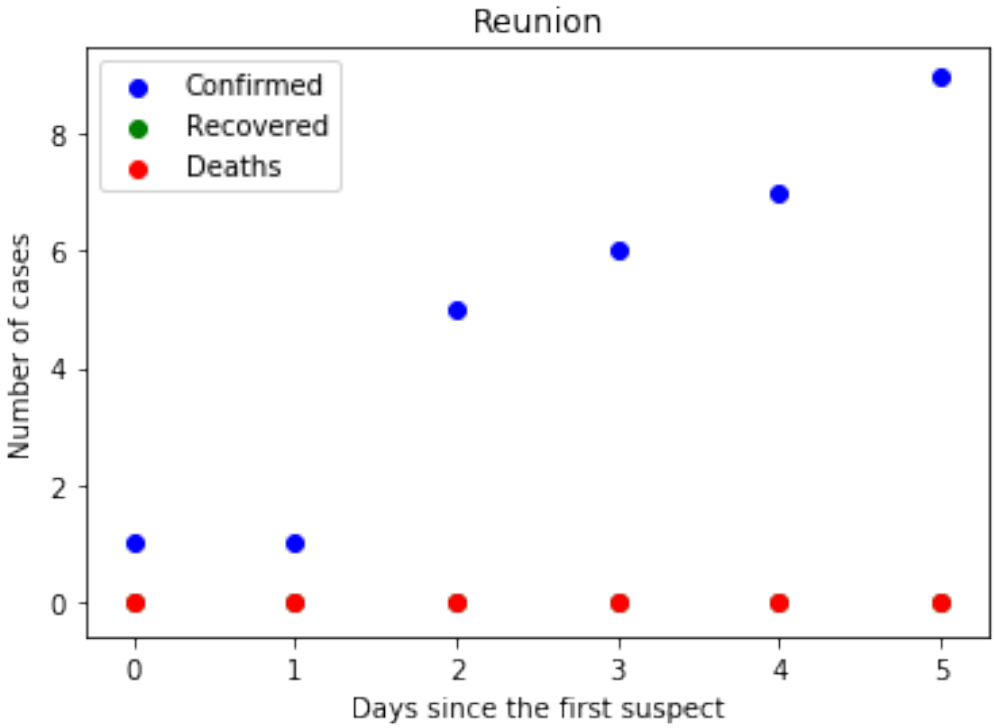

Portugal
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
50
100
150
200
250
300
0
2
4
6
8
10
12
14

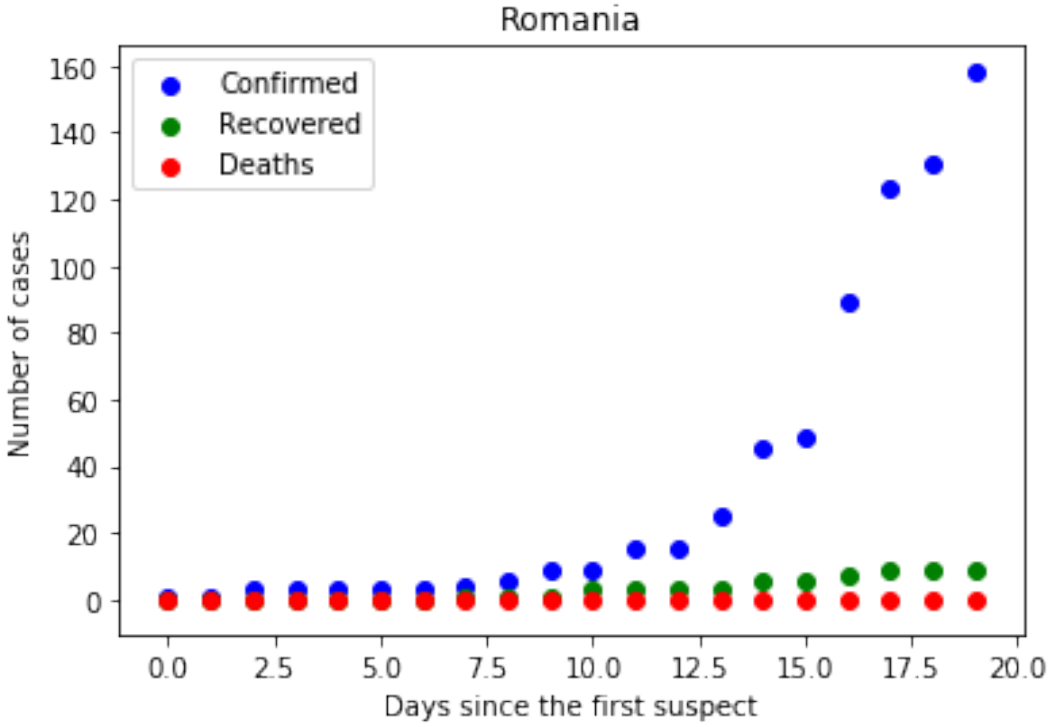

Puerto Rico
Confirmed
Recovered
Deaths
Number of cases
3.0
2.5
2.0
1.5
1.0
0.5
0.0
−0.0075 −0.0050 −0.0025 0.0000 0.0025 0.0050 0.0075
Days since the first suspect

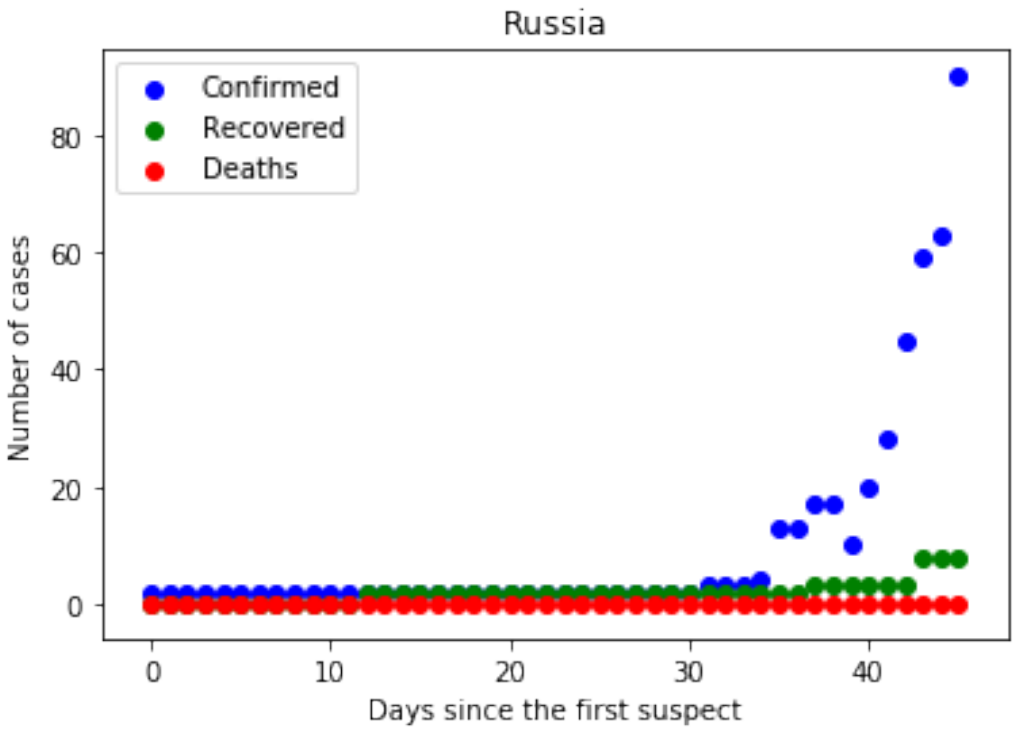

Qatar
Confirmed
Recovered
Deaths
Number of cases
400
300
200
100
0
0 2 4 6 8 10 12 14 16
Days since the first suspect

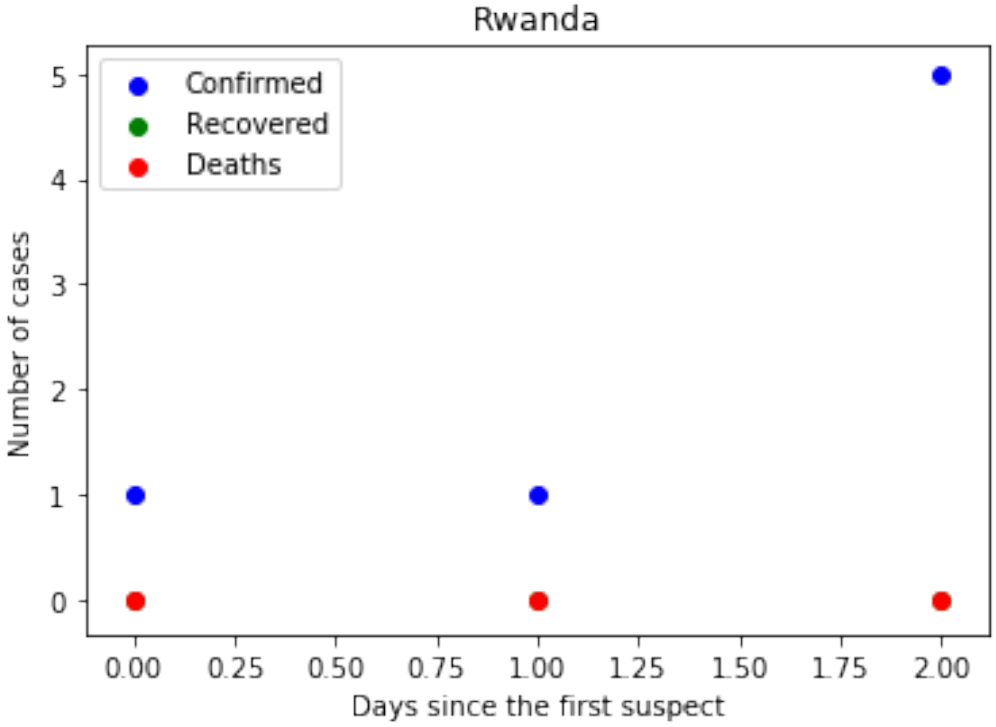

Republic of Ireland
Confirmed
Recovered
Deaths
Number of cases
20
15
10
5
0
−0.0075
−0.0050
−0.0025
0.0000
0.0025
0.0050
0.0075
Days since the first suspect

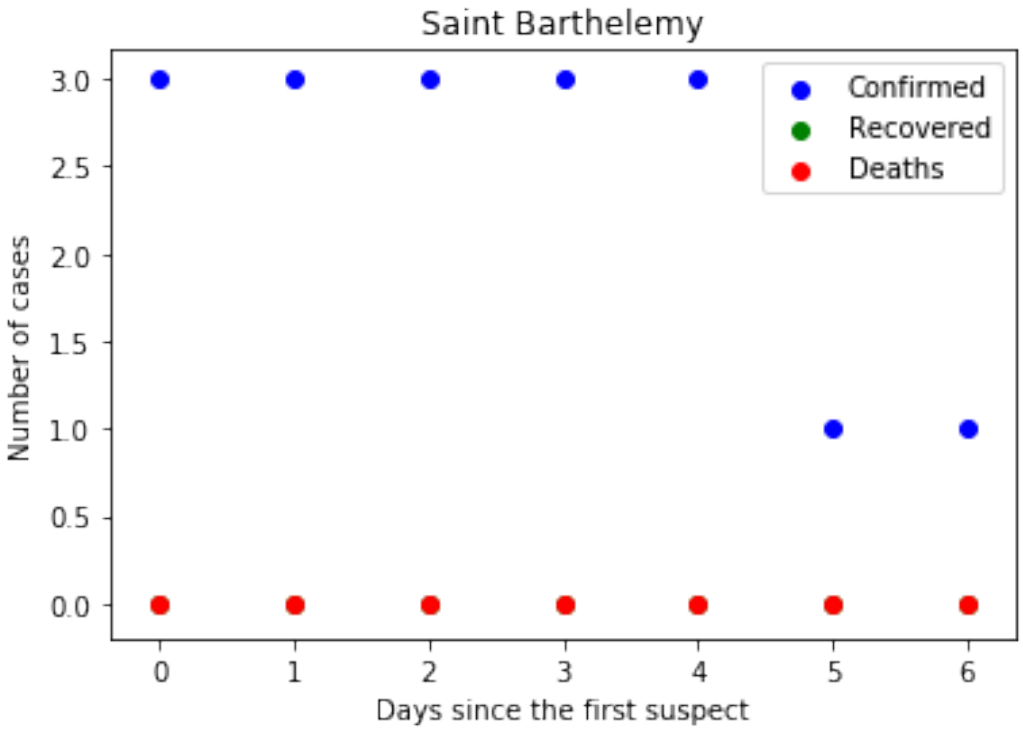

Republic of the Congo
Confirmed
Recovered
Deaths
Number of cases
1.0
0.8
0.6
0.4
0.2
0.0
−0.0075
−0.0050
−0.0025
0.0000
0.0025
0.0050
0.0075
Days since the first suspect

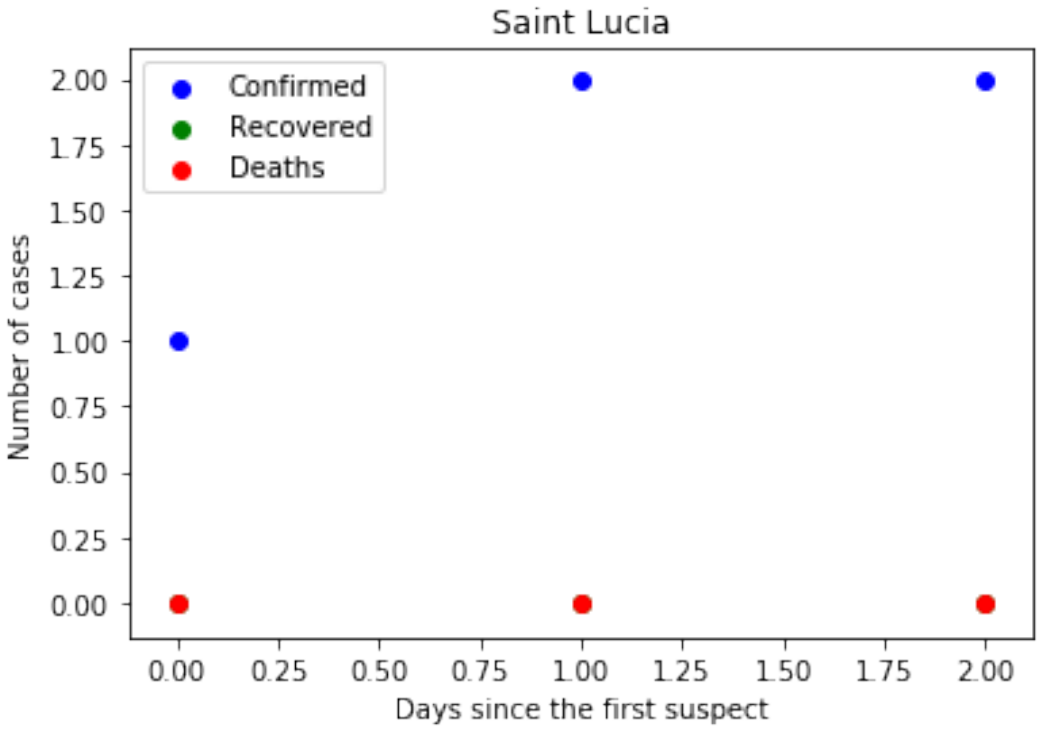

Reunion
Confirmed
Recovered
Deaths
Number of cases
0
2
4
6
8
0
1
2
3
4
5
Days since the first suspect

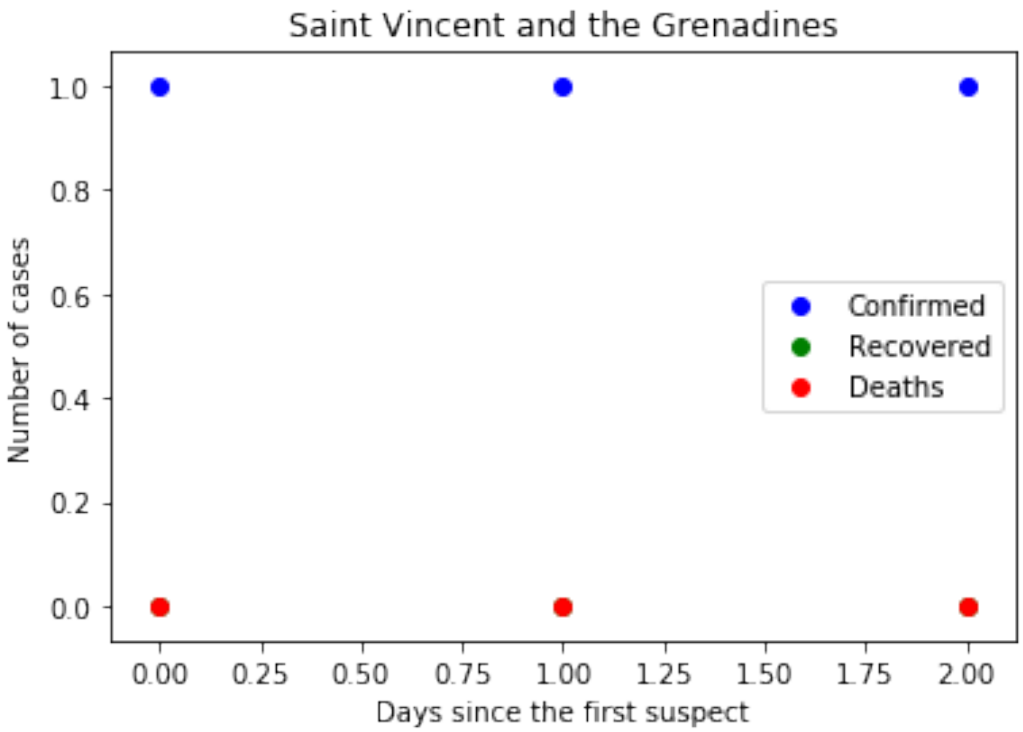

Romania
Confirmed
Recovered
Deaths
Number of cases
0
20
40
60
80
100
120
140
160
0.0
2.5
5.0
7.5
10.0
12.5
15.0
17.5
20.0
Days since the first suspect

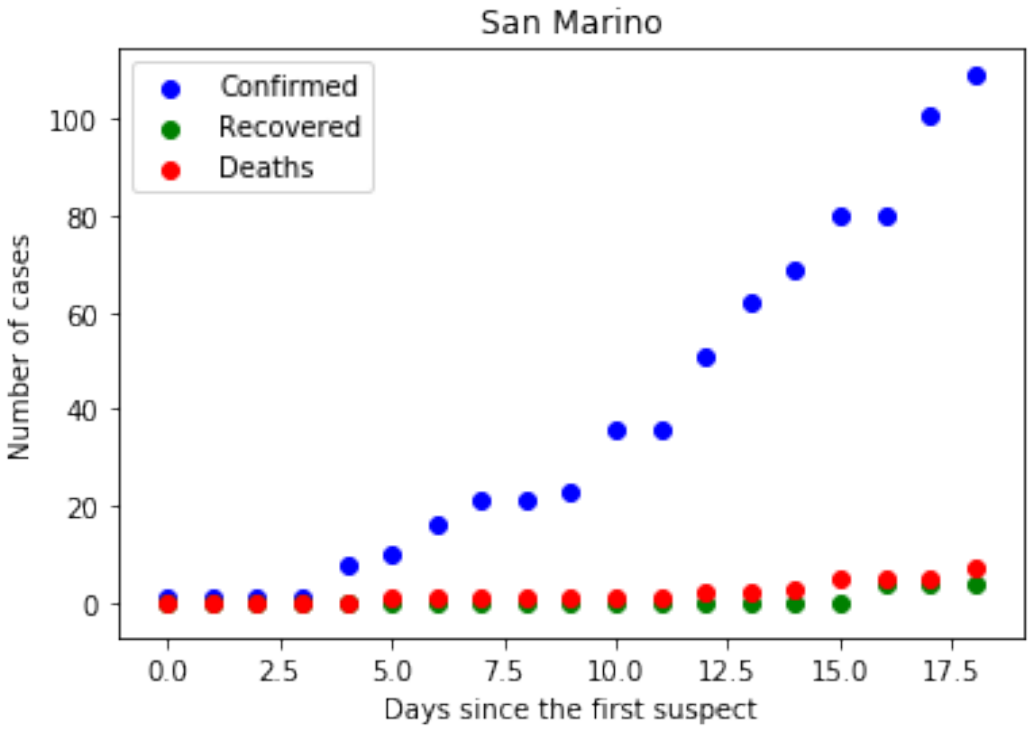

Russia
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
20
40
60
80
0
10
20
30
40

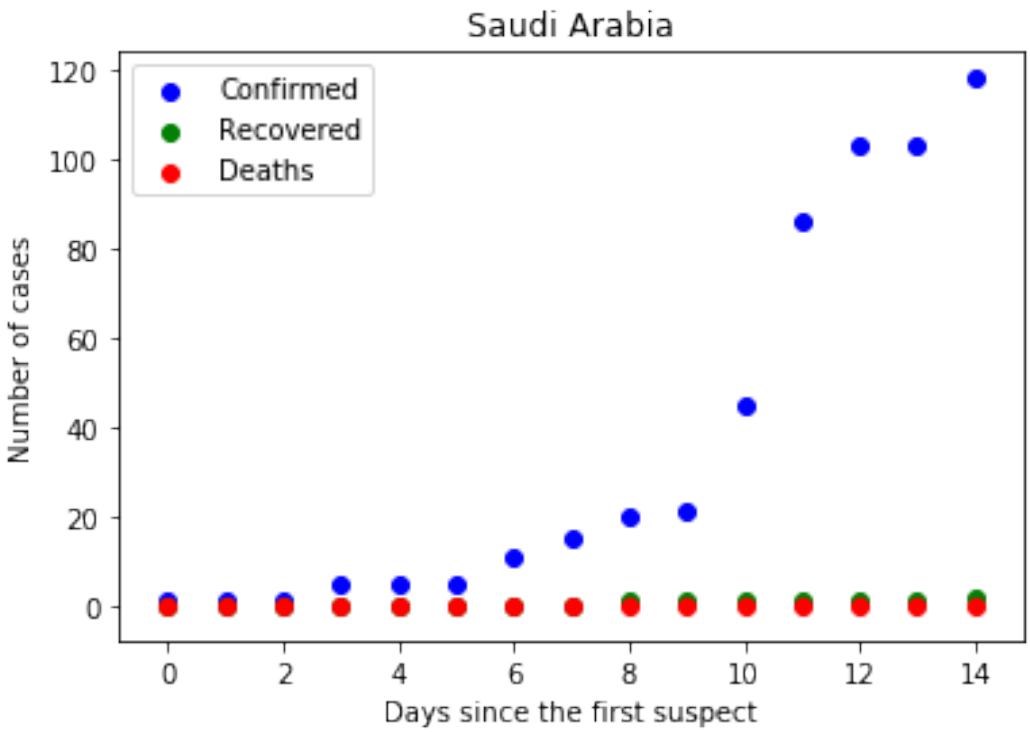

Rwanda
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
1
2
3
4
5
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
2.00

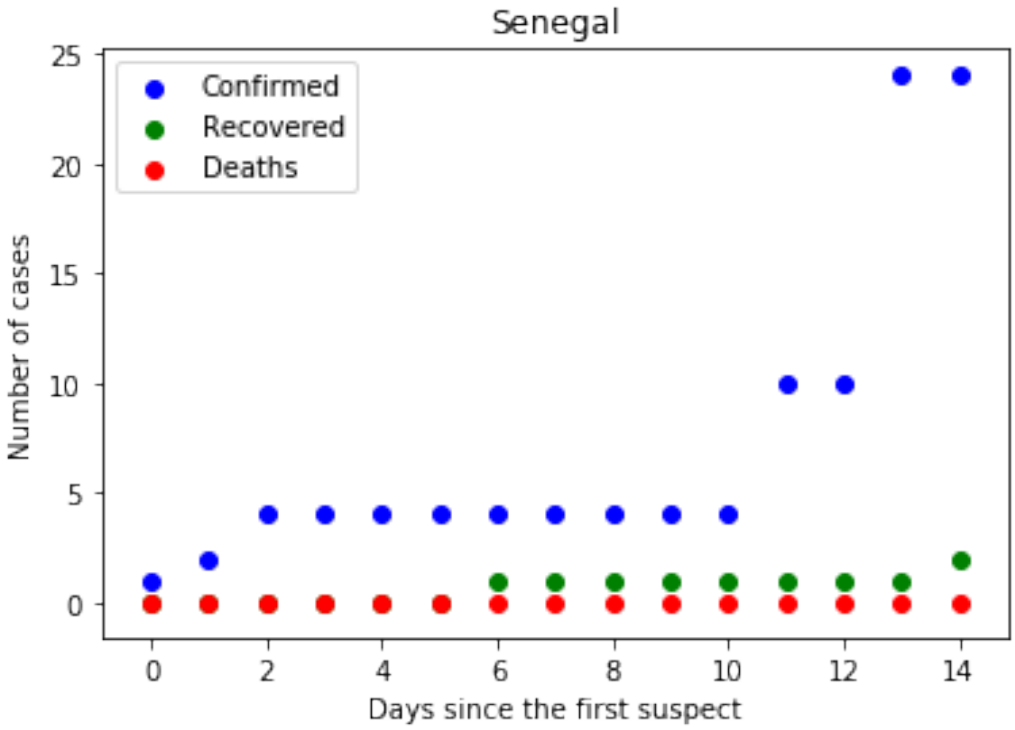

Saint Barthelemy
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0.0
0.5
1.0
1.5
2.0
2.5
3.0
0
1
2
3
4
5
6

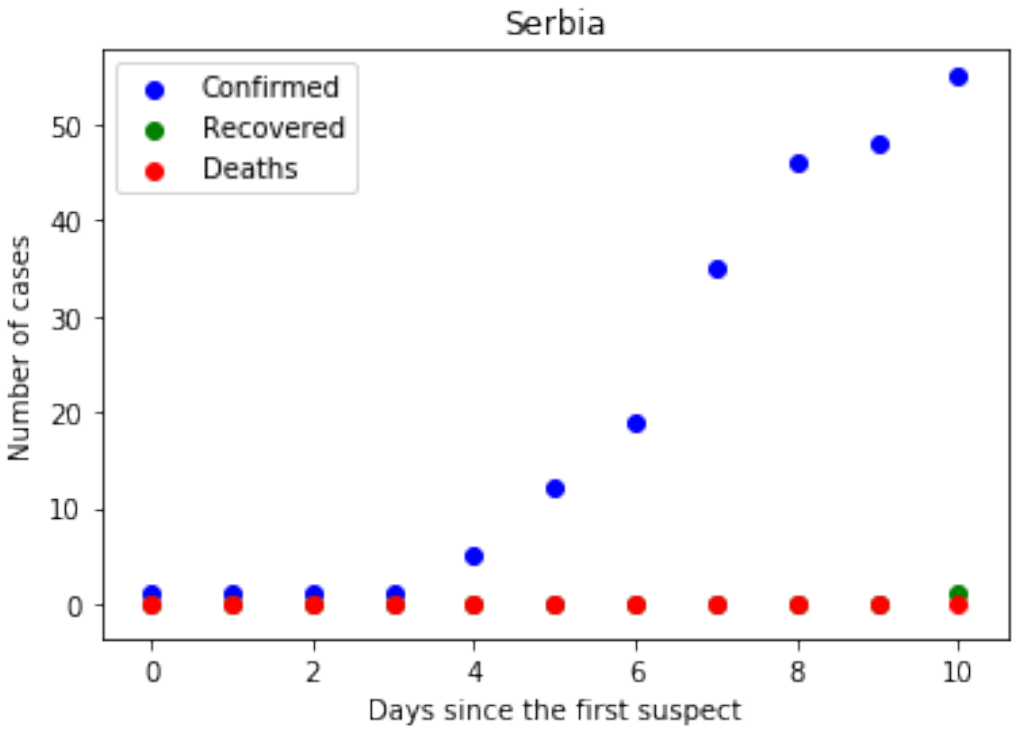

Saint Lucia
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
2.00

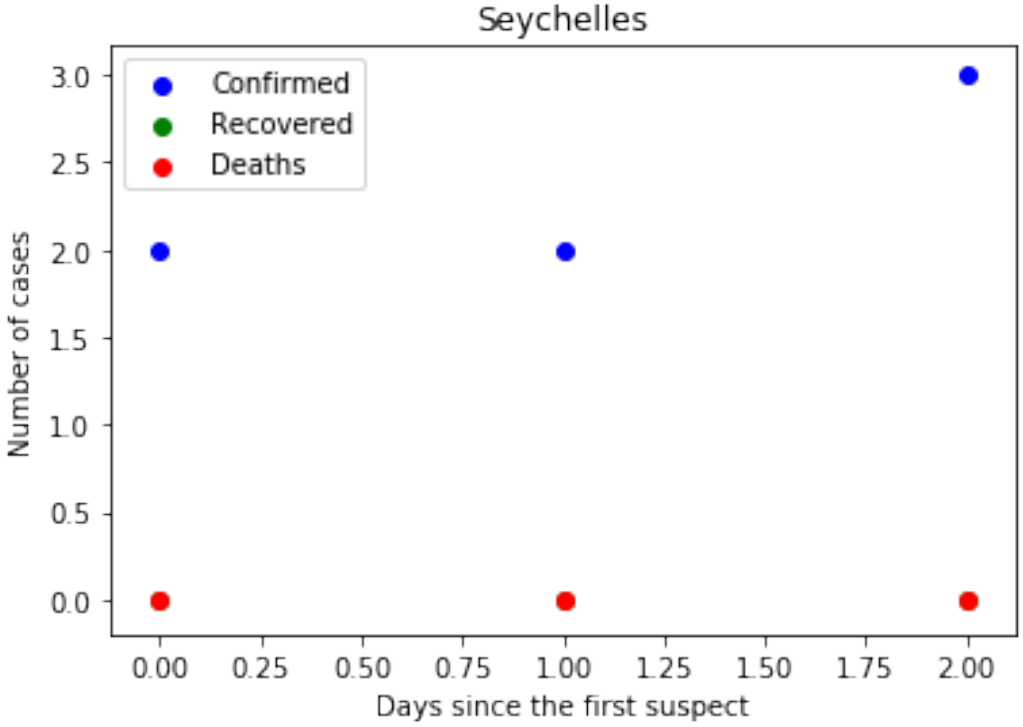

Saint Vincent and the Grenadines
Number of cases
Days since the first suspect
Confirmed
Recovered
Deaths
1.0
0.8
0.6
0.4
0.2
0.0
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
2.00

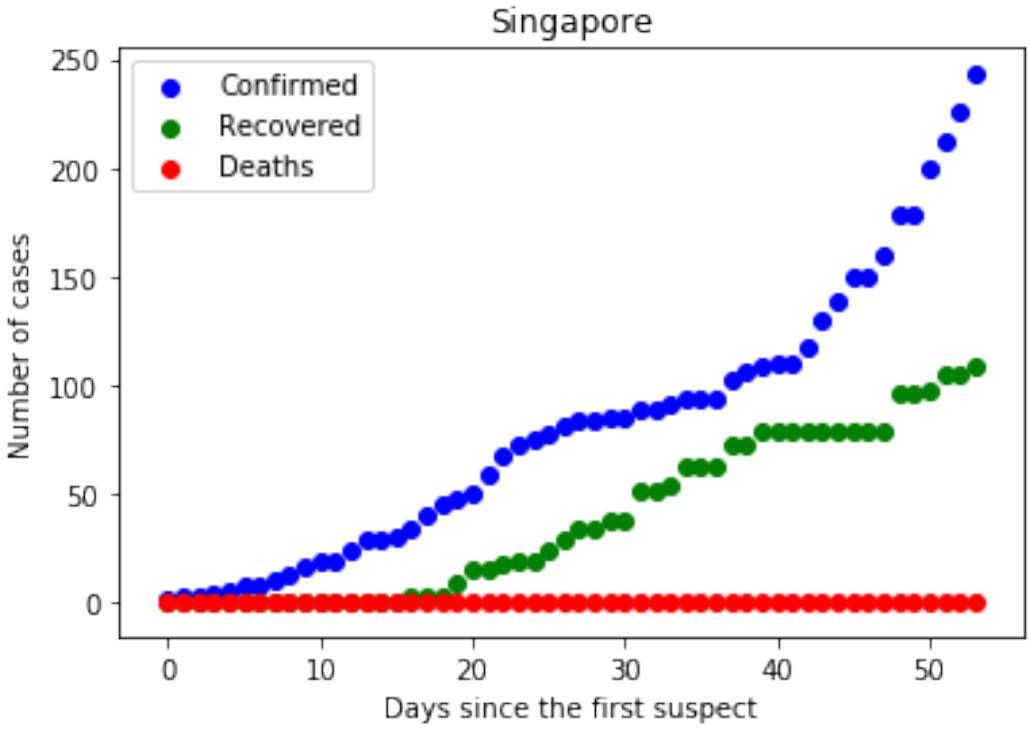

San Marino
Number of cases
Days since the first suspect
Confirmed
Recovered
Deaths
100
80
60
40
20
0
0.0
2.5
5.0
7.5
10.0
12.5
15.0
17.5

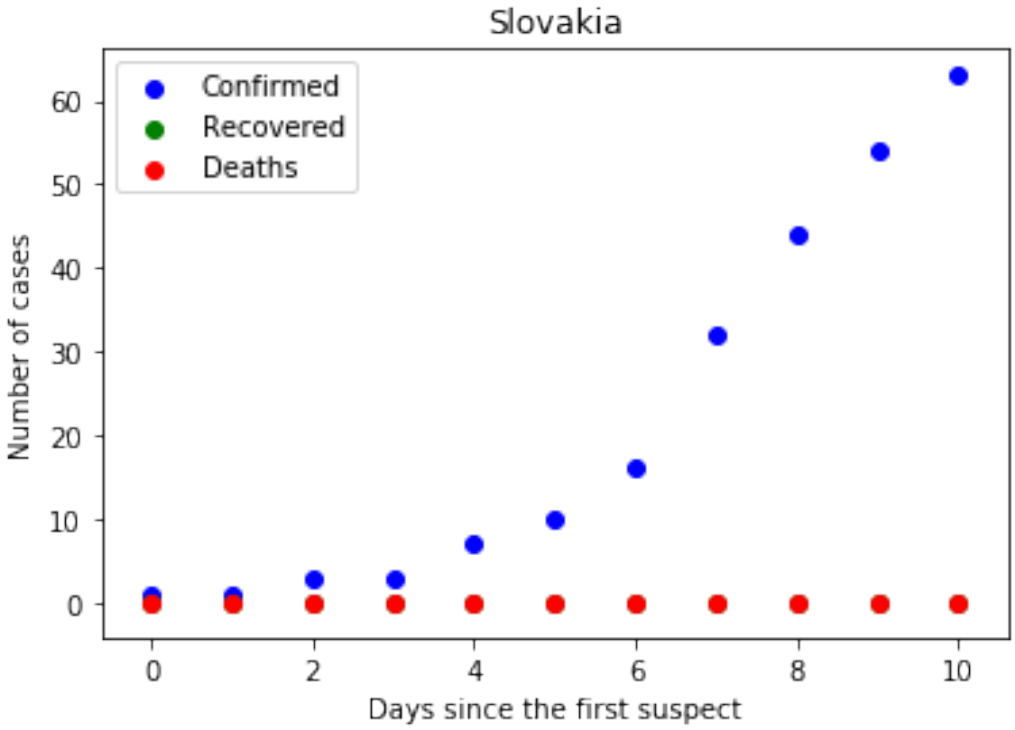

Saudi Arabia
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
20
40
60
80
100
120
0
2
4
6
8
10
12
14

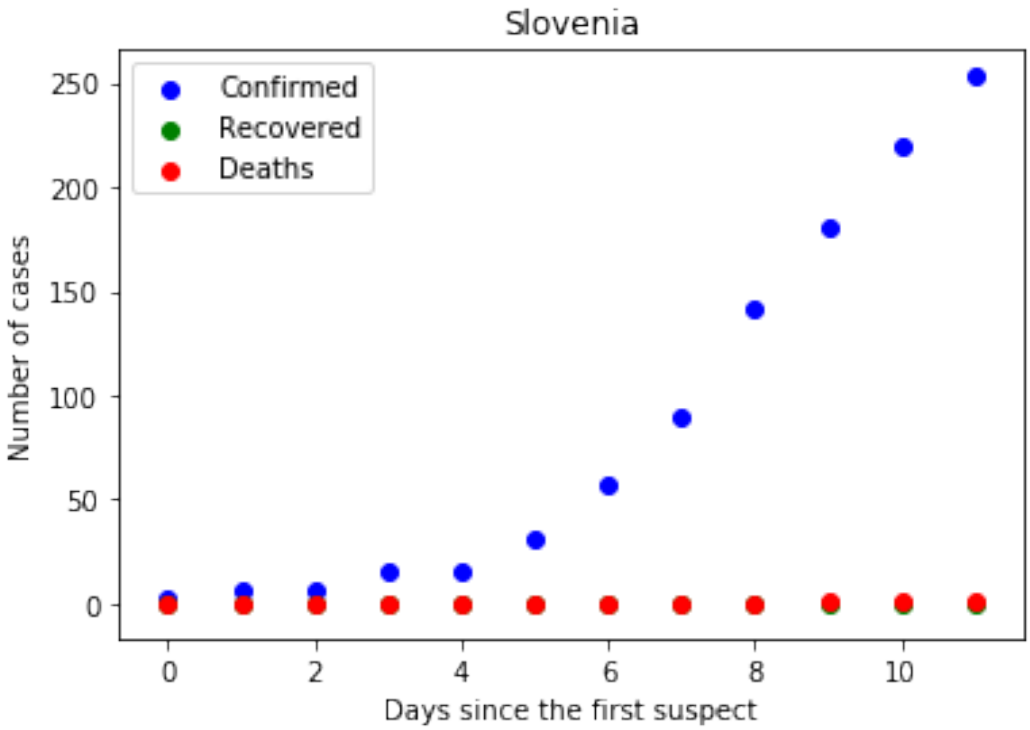

Senegal
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
5
10
15
20
25
0
2
4
6
8
10
12
14

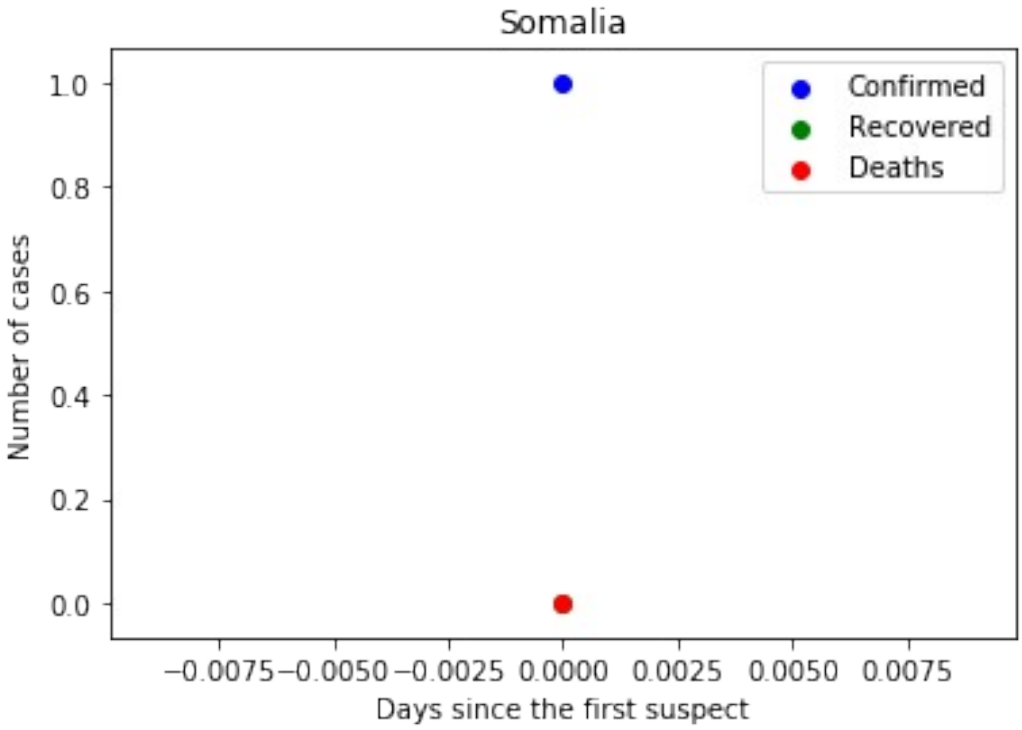

Serbia
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect

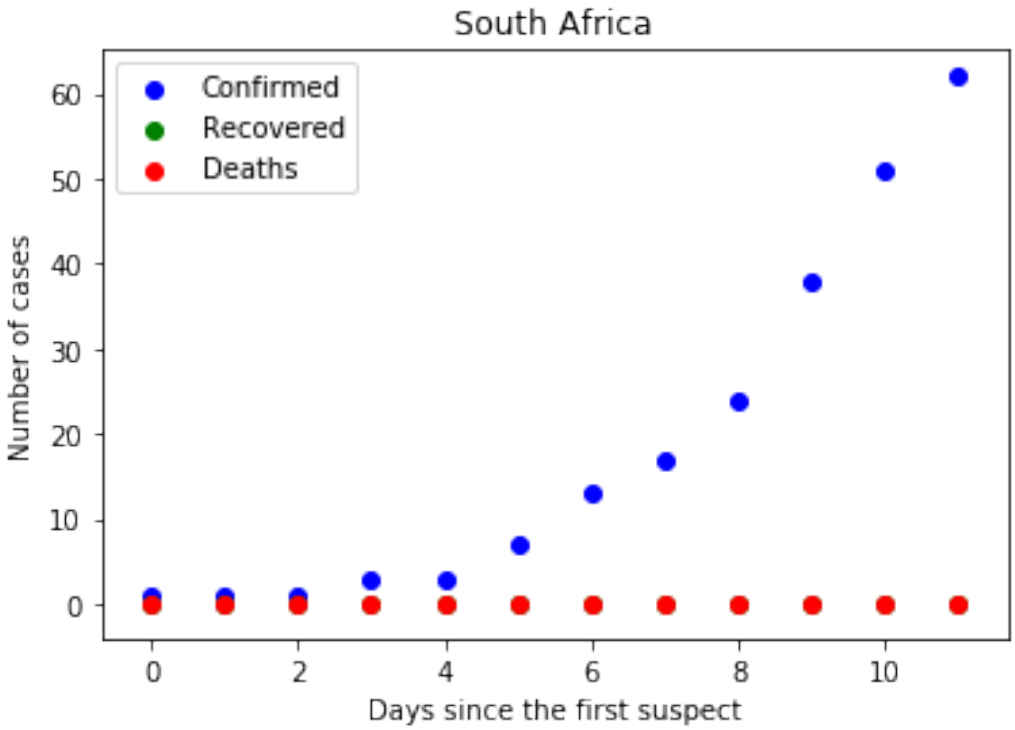

Seychelles
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect

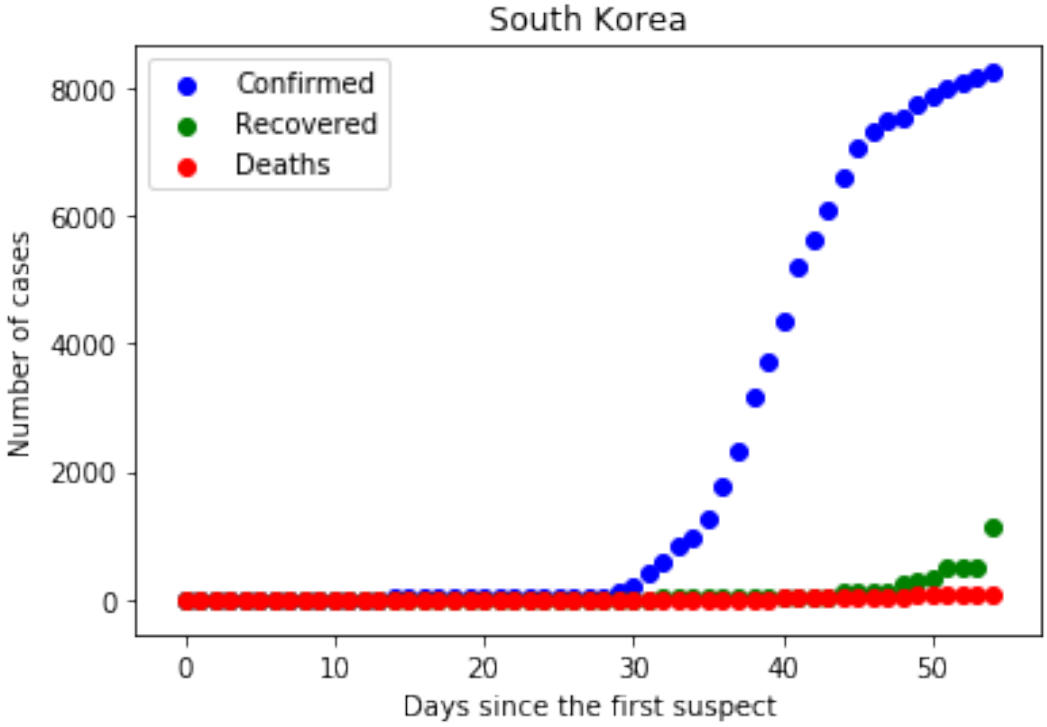

Singapore
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
50
100
150
200
250
0
10
20
30
40
50

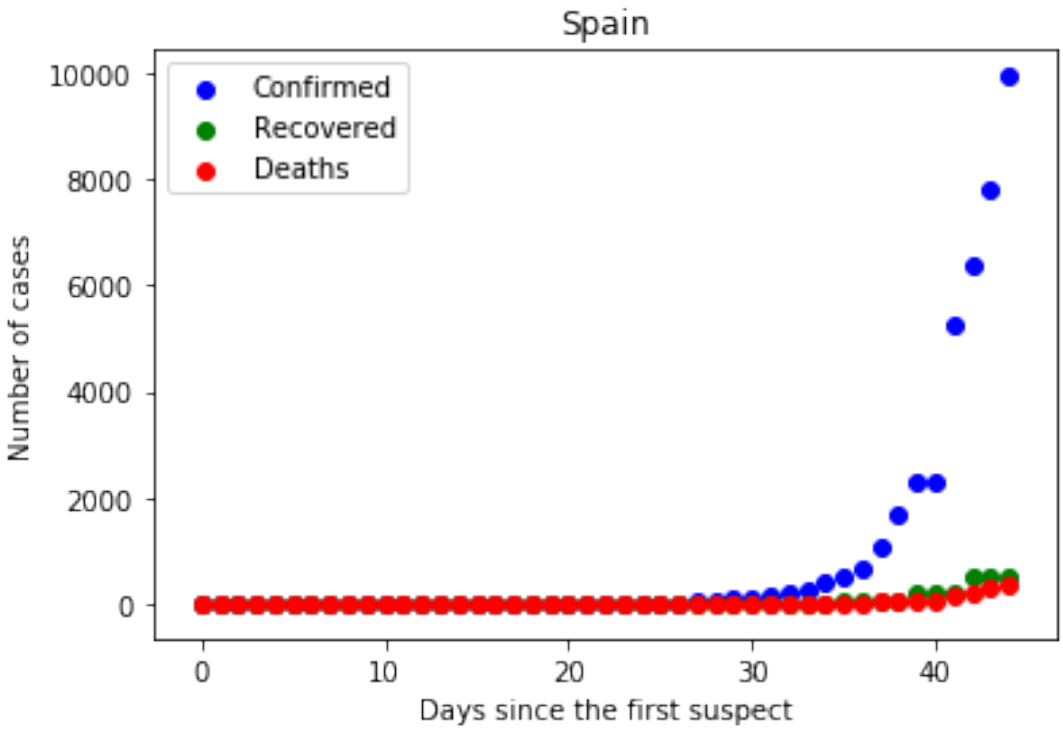

Slovakia
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
10
20
30
40
50
60
0
2
4
6
8
10

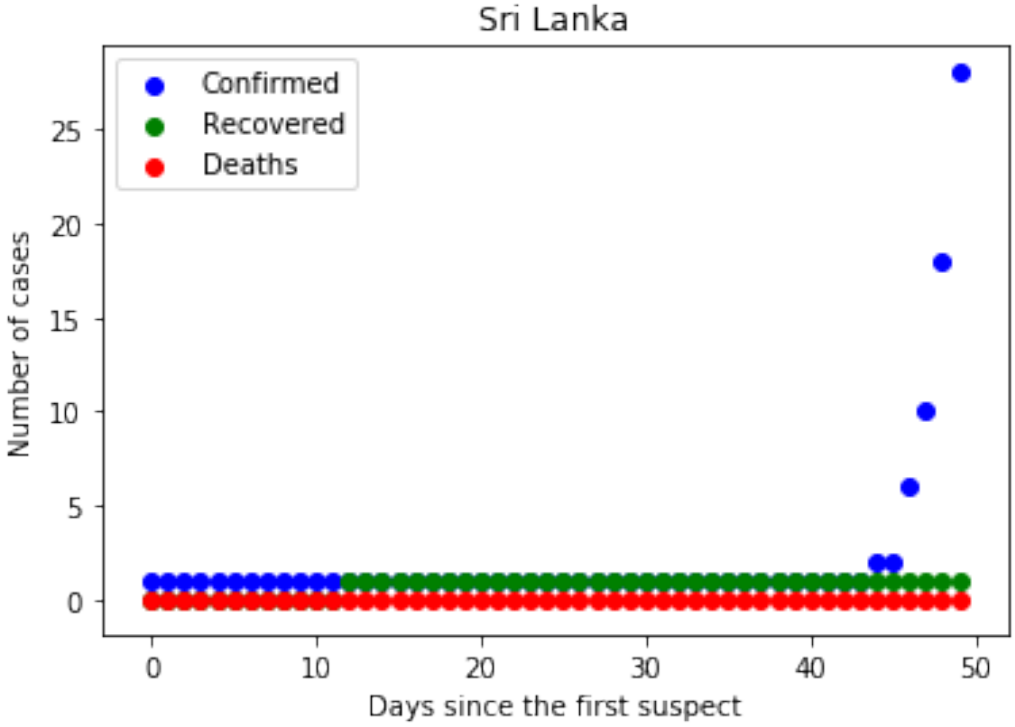

Slovenia
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
50
100
150
200
250
0
2
4
6
8
10

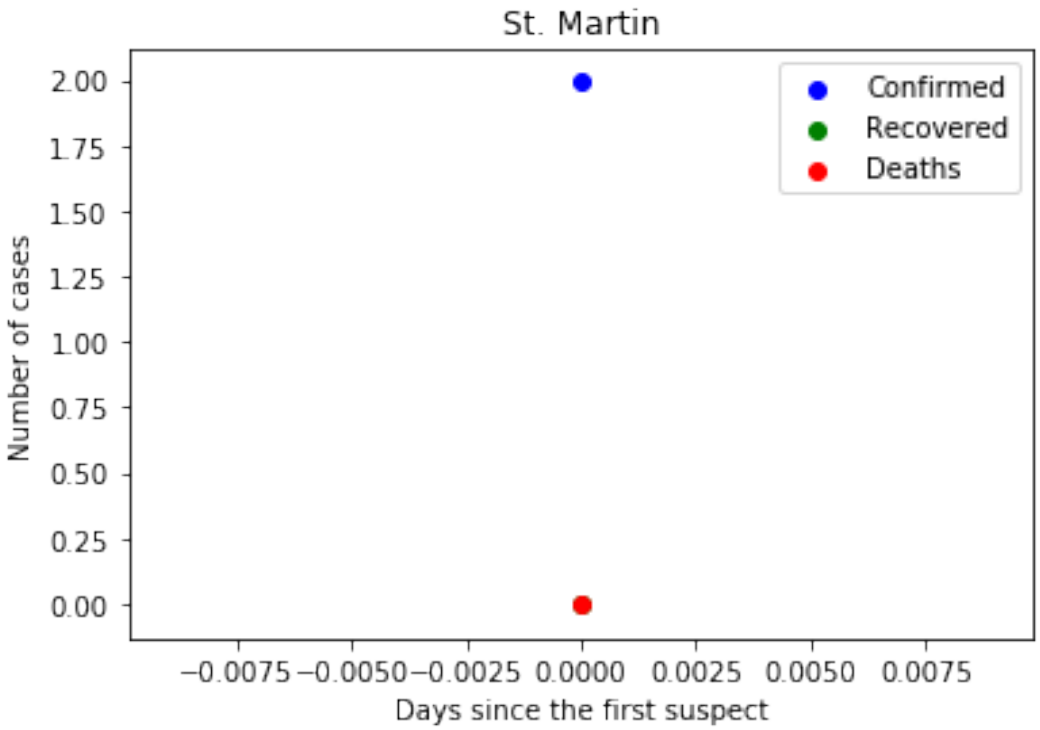

Somalia
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0.0
0.2
0.4
0.6
0.8
1.0
−0.0075
−0.0050
−0.0025
0.0000
0.0025
0.0050
0.0075

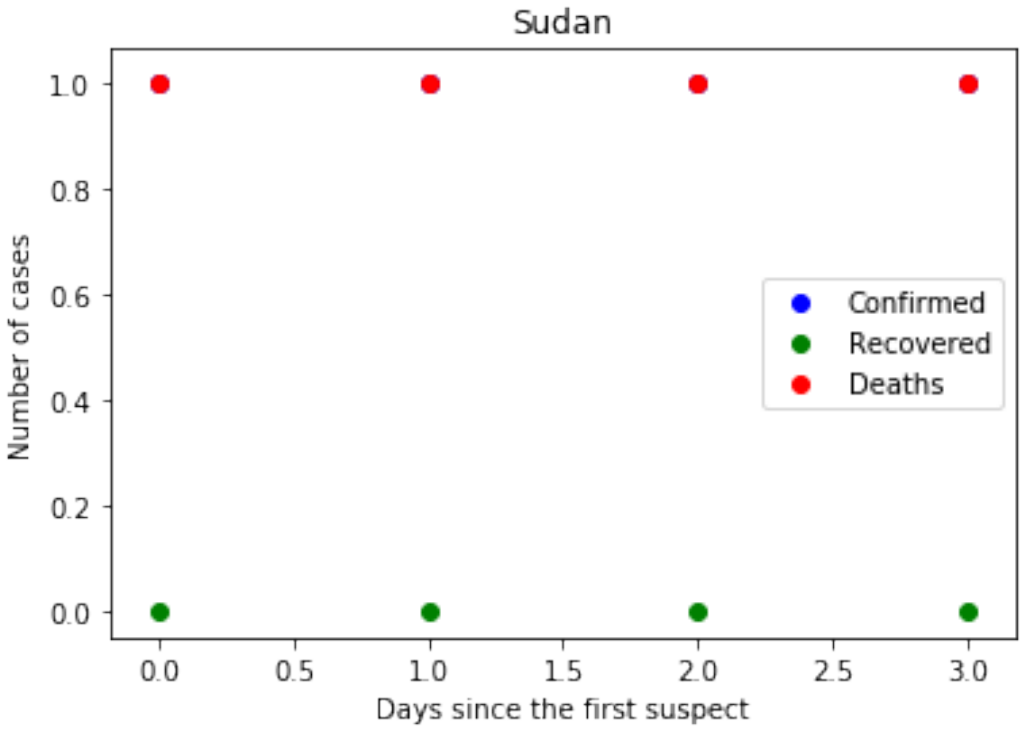

South Africa
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
10
20
30
40
50
60
0
2
4
6
8
10

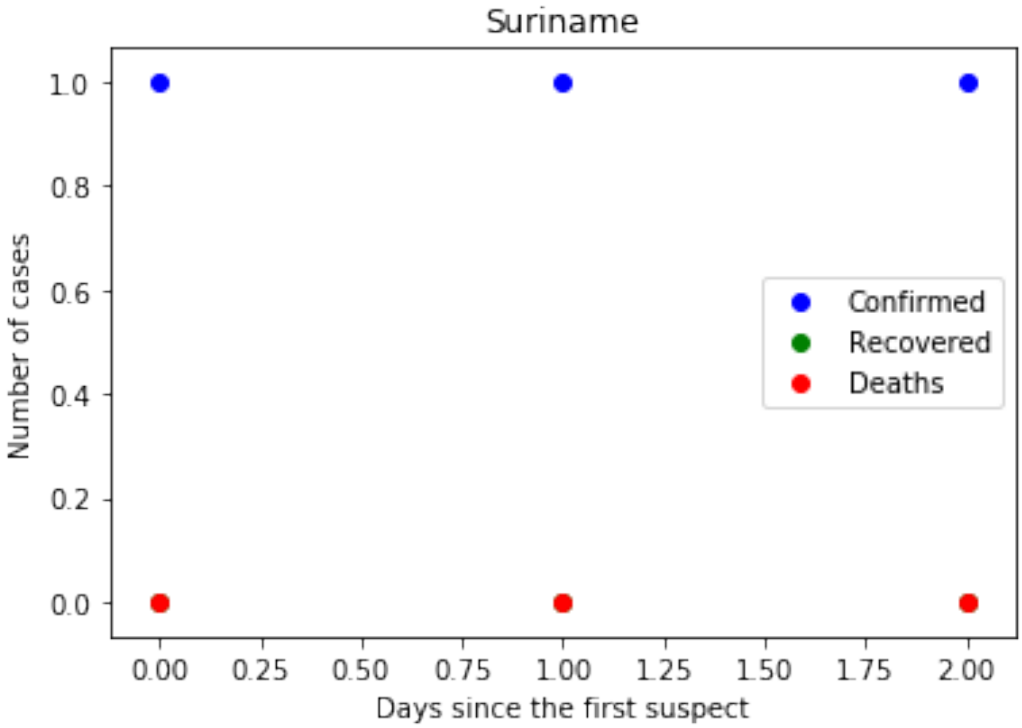

South Korea
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
2000
4000
6000
8000
0
10
20
30
40
50

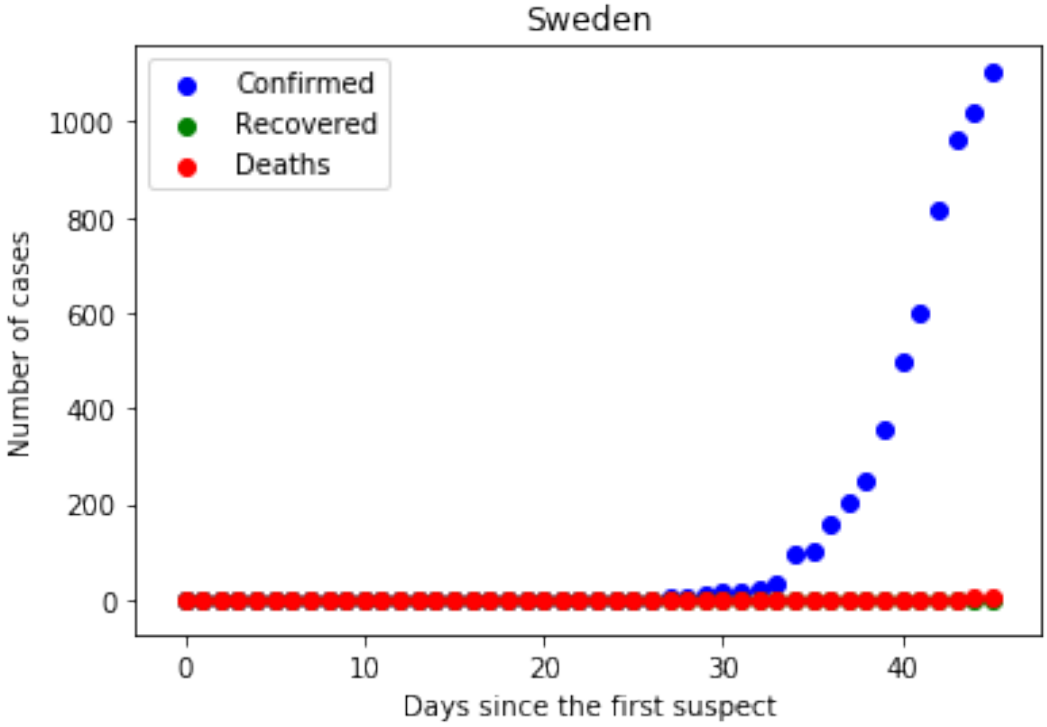

Spain
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
2000
4000
6000
8000
10000
0
10
20
30
40

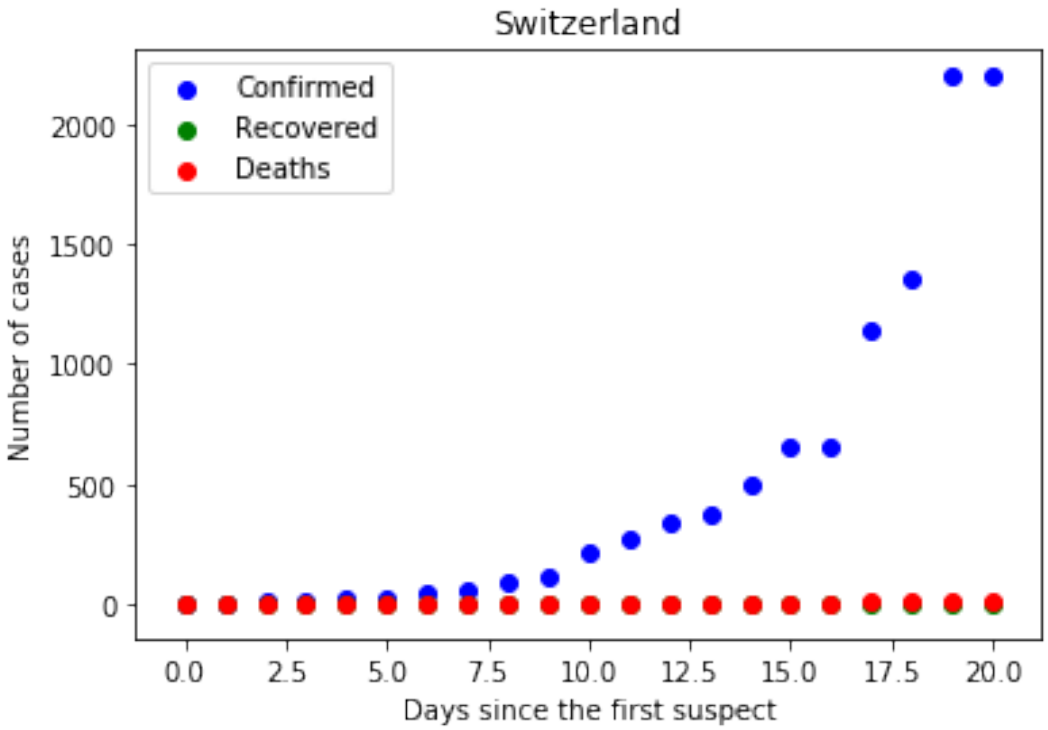

Sri Lanka
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
5
10
15
20
25
0
10
20
30
40
50

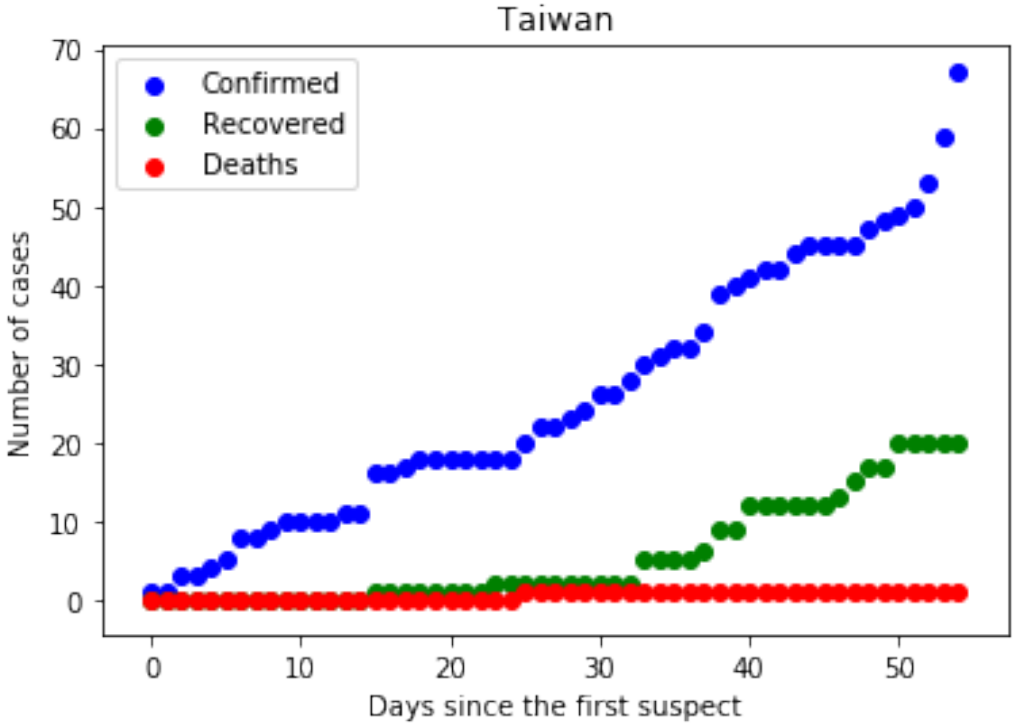

St. Martin
Confirmed
Recovered
Deaths
Number of cases
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0.00
−0.0075
−0.0050
−0.0025
0.0000
0.0025
0.0050
0.0075
Days since the first suspect

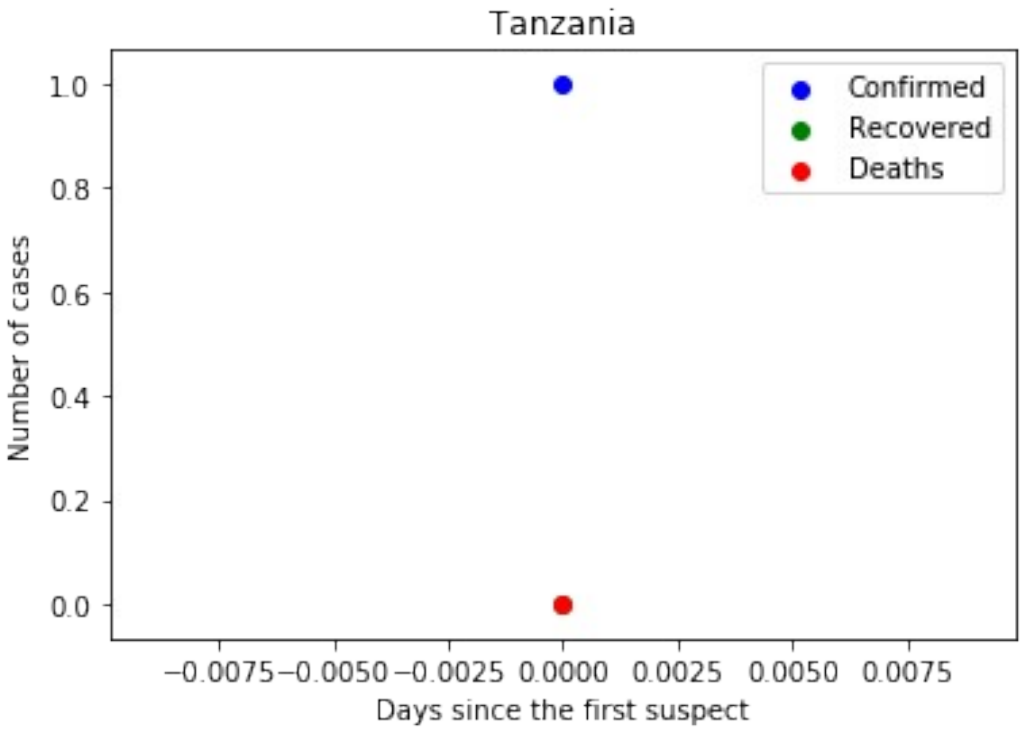

Sudan
Confirmed
Recovered
Deaths
Number of cases
1.0
0.8
0.6
0.4
0.2
0.0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Days since the first suspect

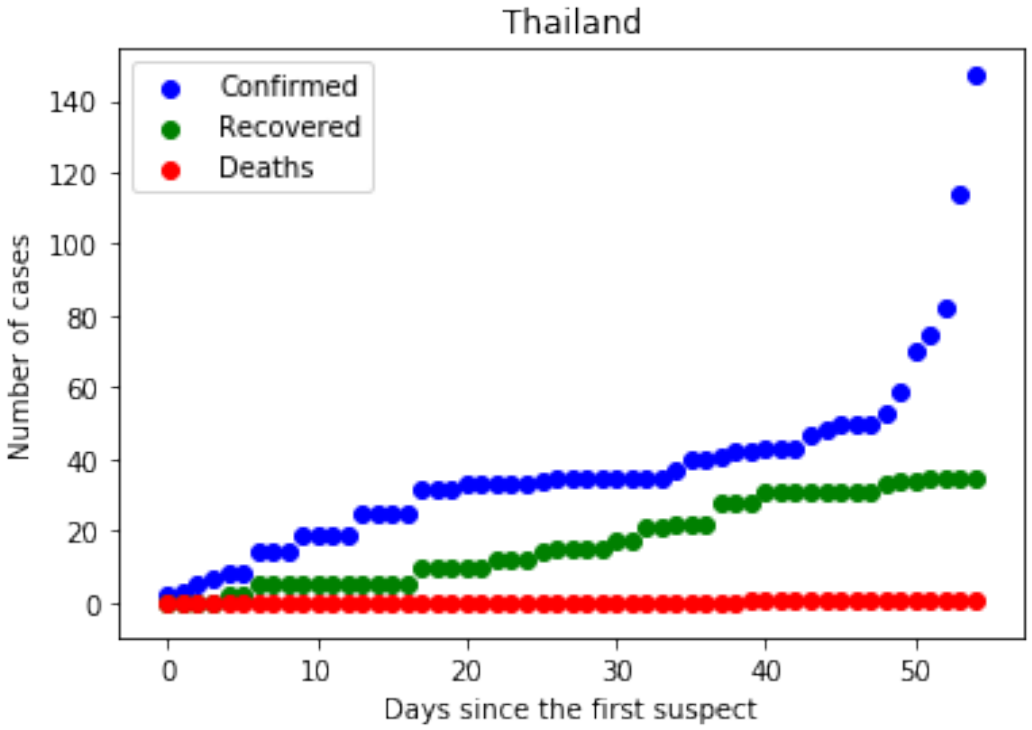

Suriname
Number of cases
Days since the first suspect
Confirmed
Recovered
Deaths
1.0
0.8
0.6
0.4
0.2
0.0
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
2.00

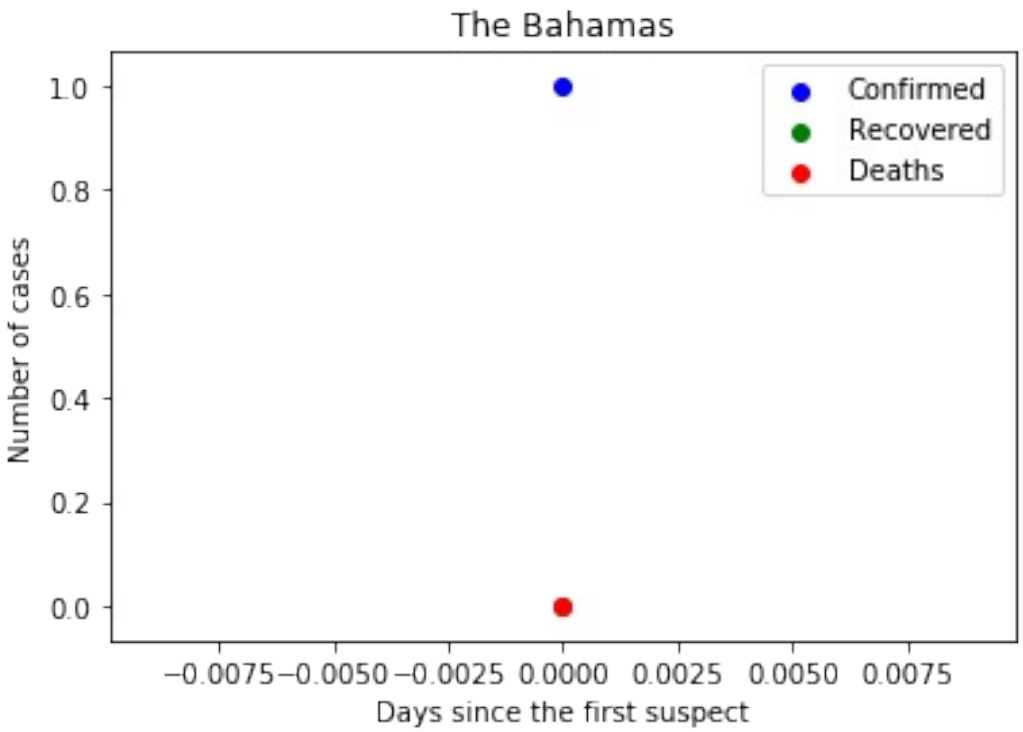

Sweden
Number of cases
Days since the first suspect
Confirmed
Recovered
Deaths
1000
800
600
400
200
0
0
10
20
30
40

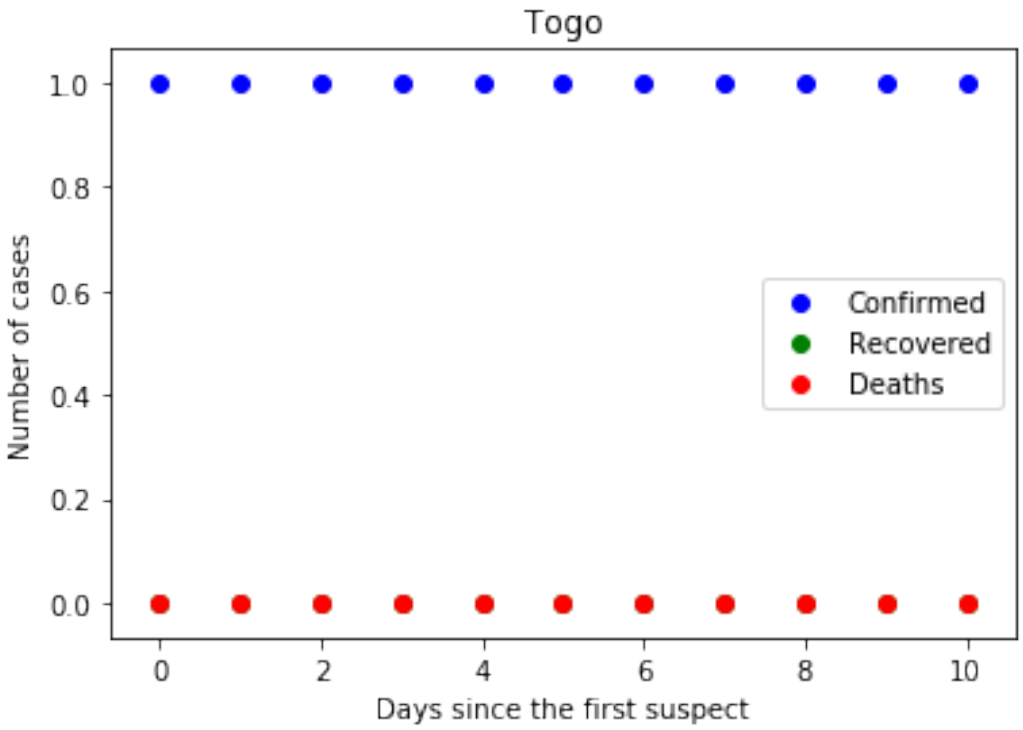

Switzerland
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
500
1000
1500
2000
0.0
2.5
5.0
7.5
10.0
12.5
15.0
17.5
20.0

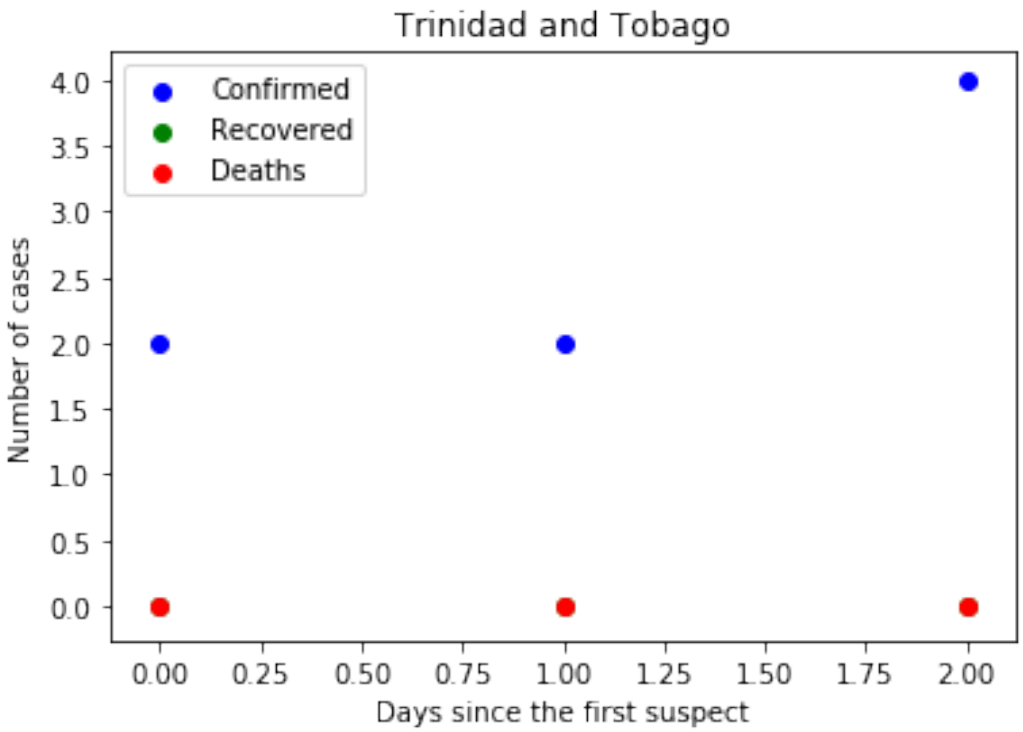

Taiwan
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
10
20
30
40
50
60
70

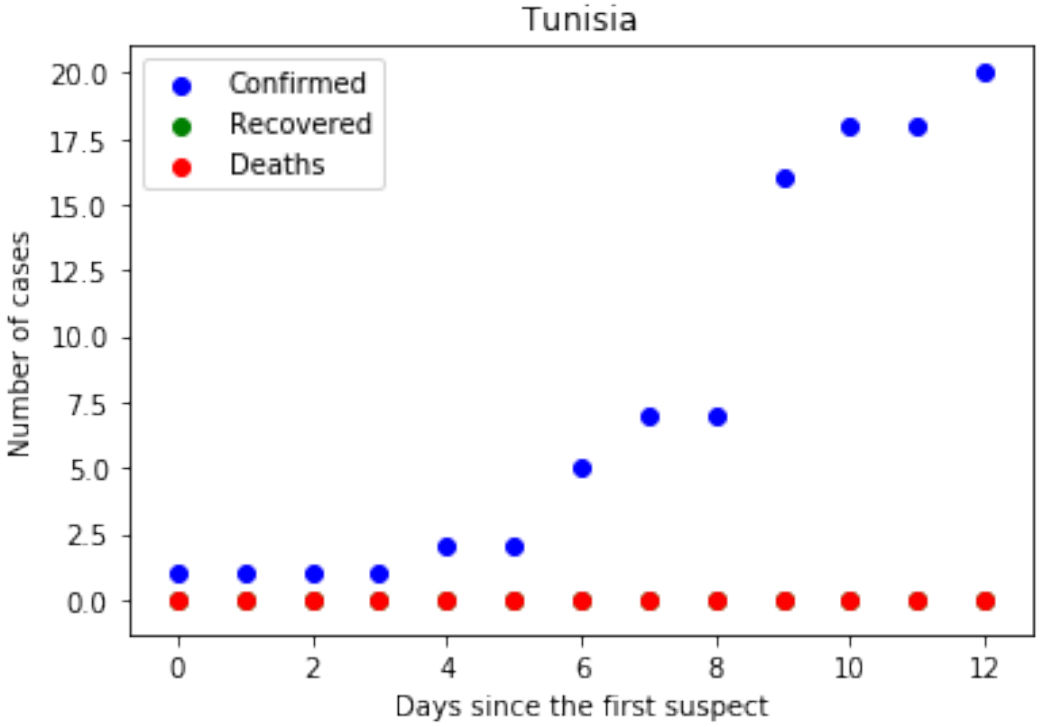

Tanzania
Confirmed
Recovered
Deaths
Number of cases
1.0
0.8
0.6
0.4
0.2
0.0
−0.0075
−0.0050
−0.0025
0.0000
0.0025
0.0050
0.0075
Days since the first suspect

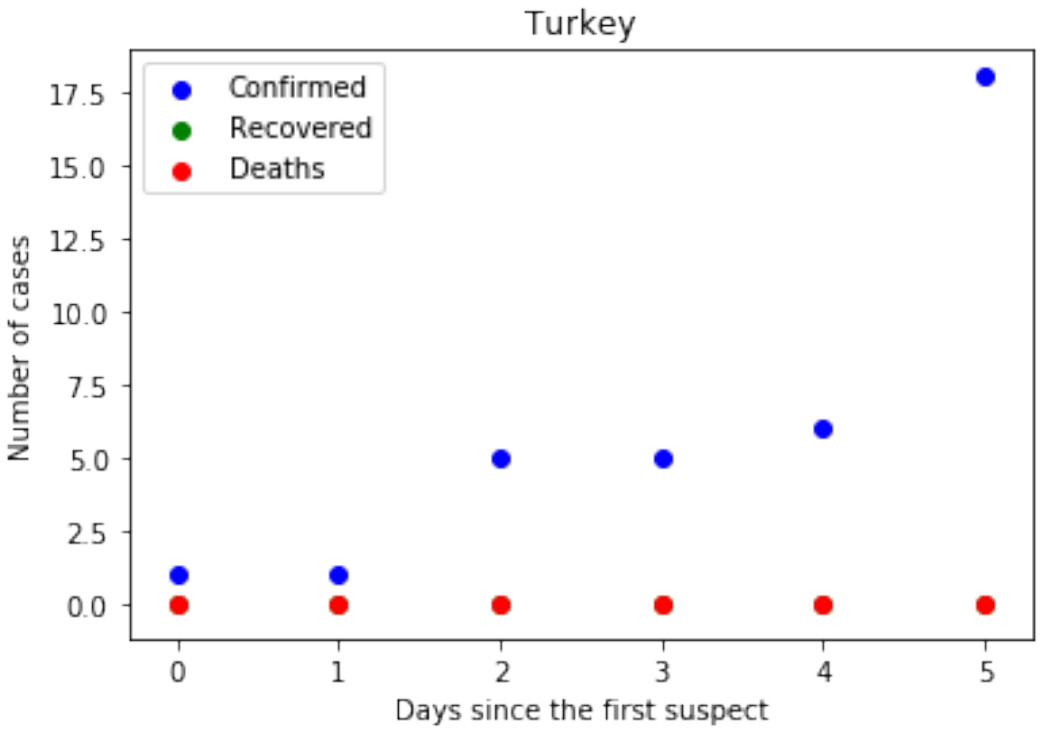

Thailand
Confirmed
Recovered
Deaths
Number of cases
140
120
100
80
60
40
20
0
0
10
20
30
40
50
Days since the first suspect

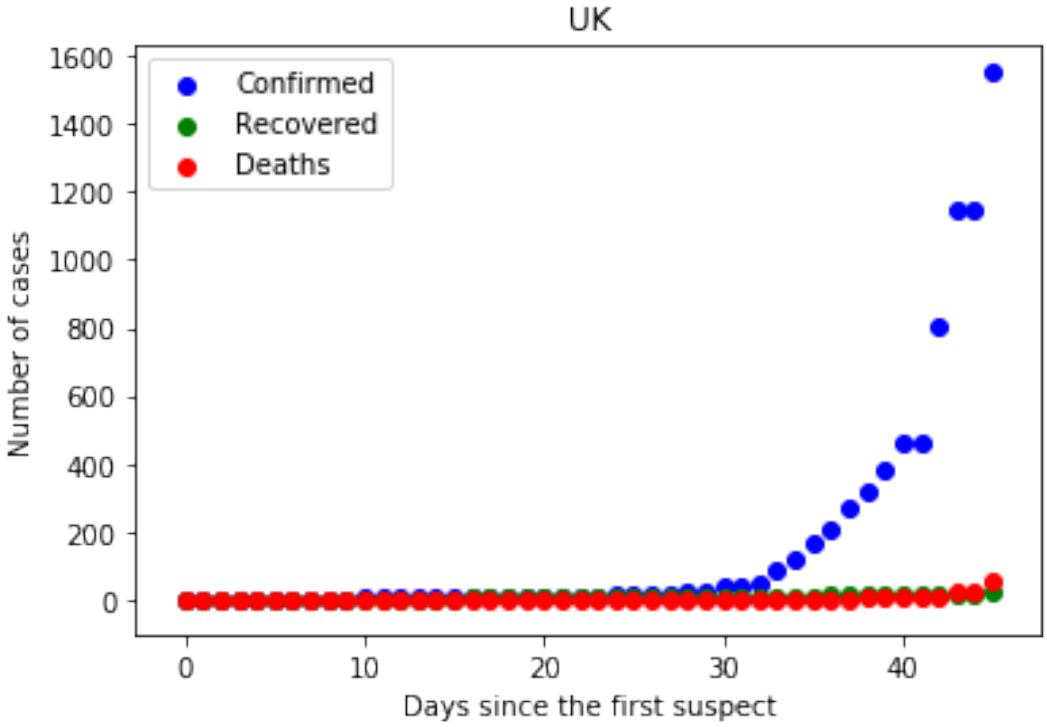

The Bahamas
Confirmed
Recovered
Deaths
Number of cases
1.0
0.8
0.6
0.4
0.2
0.0
−0.0075
−0.0050
−0.0025
0.0000
0.0025
0.0050
0.0075
Days since the first suspect

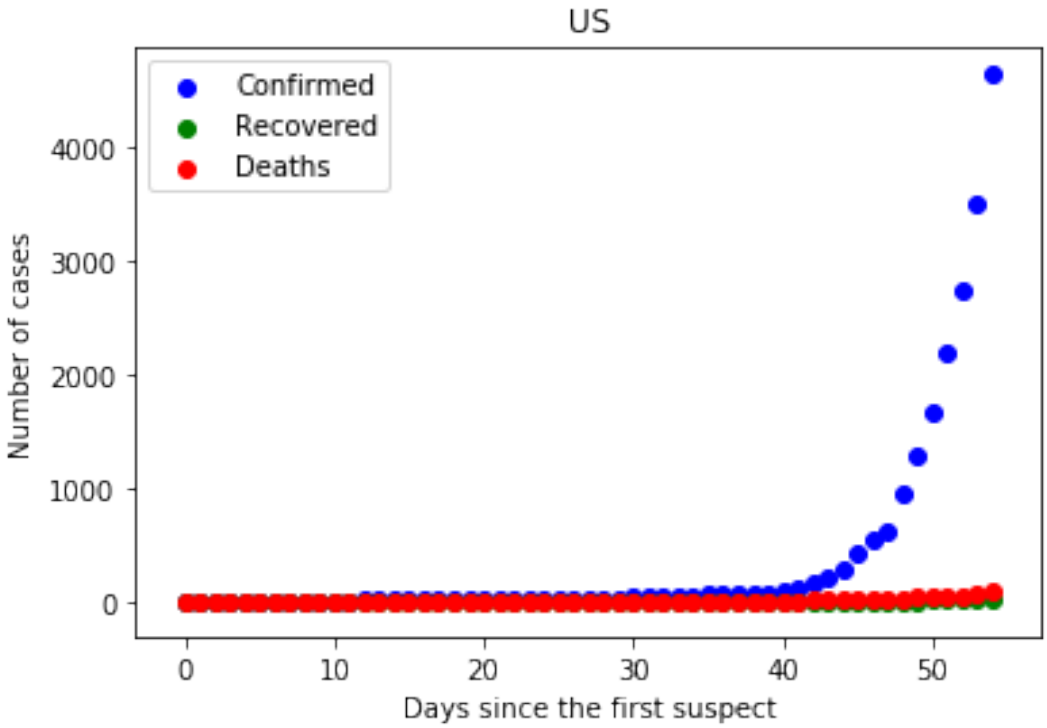

Togo
Confirmed
Recovered
Deaths
Number of cases
1.0
0.8
0.6
0.4
0.2
0.0
0
2
4
6
8
10
Days since the first suspect

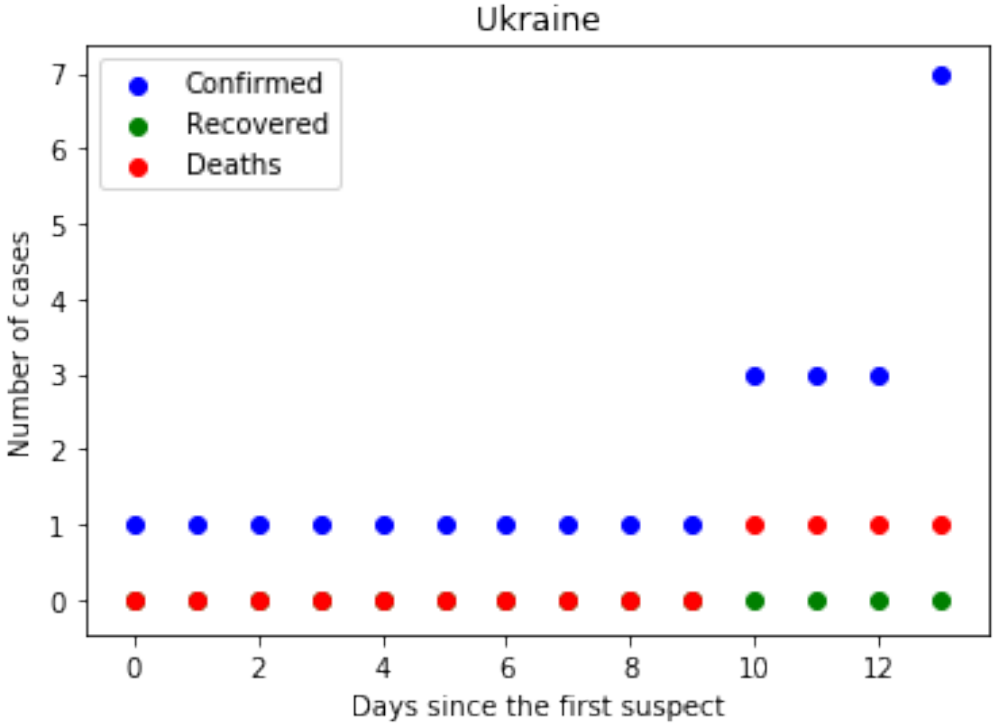

Trinidad and Tobago
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
2.00

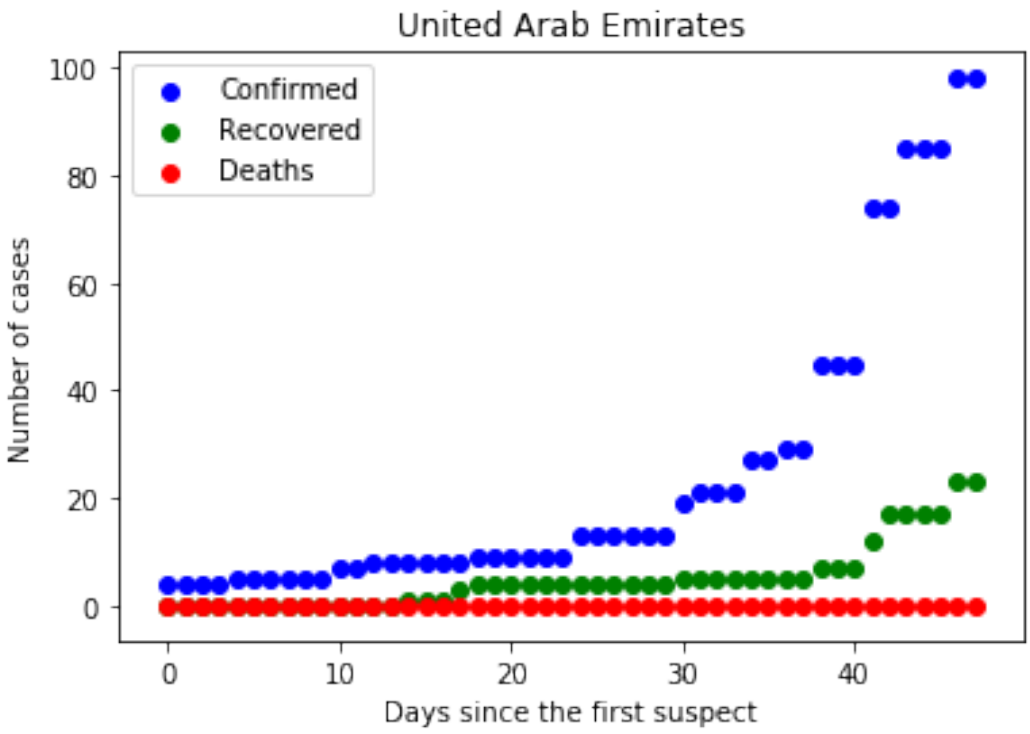

Tunisia
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0.0
2.5
5.0
7.5
10.0
12.5
15.0
17.5
20.0
0
2
4
6
8
10
12

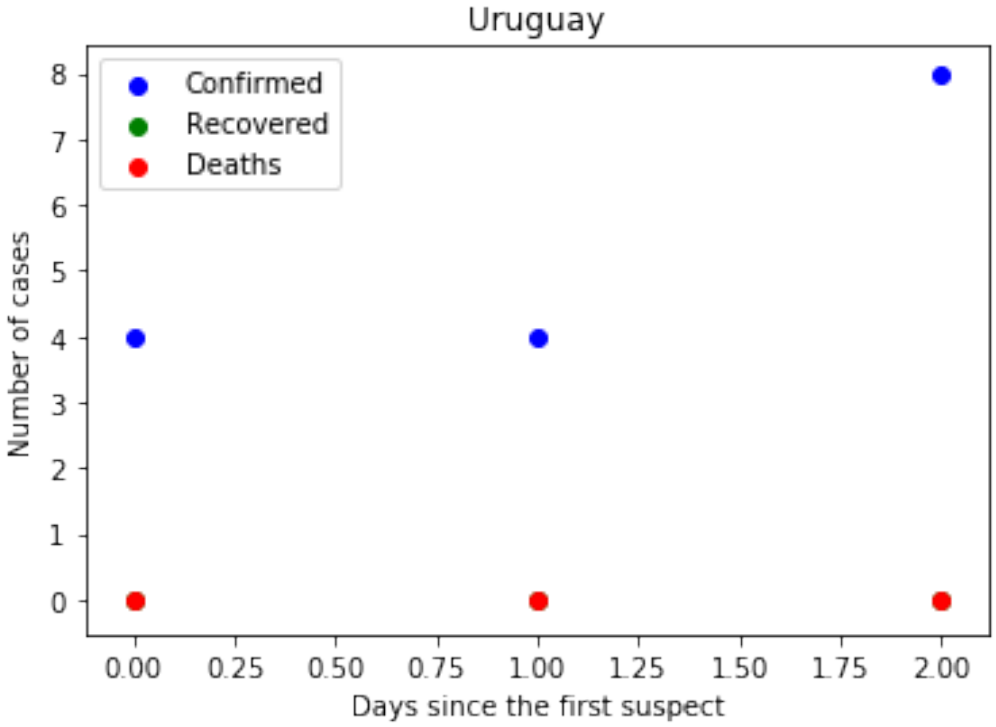

Turkey
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0.0
2.5
5.0
7.5
10.0
12.5
15.0
17.5
0
1
2
3
4
5

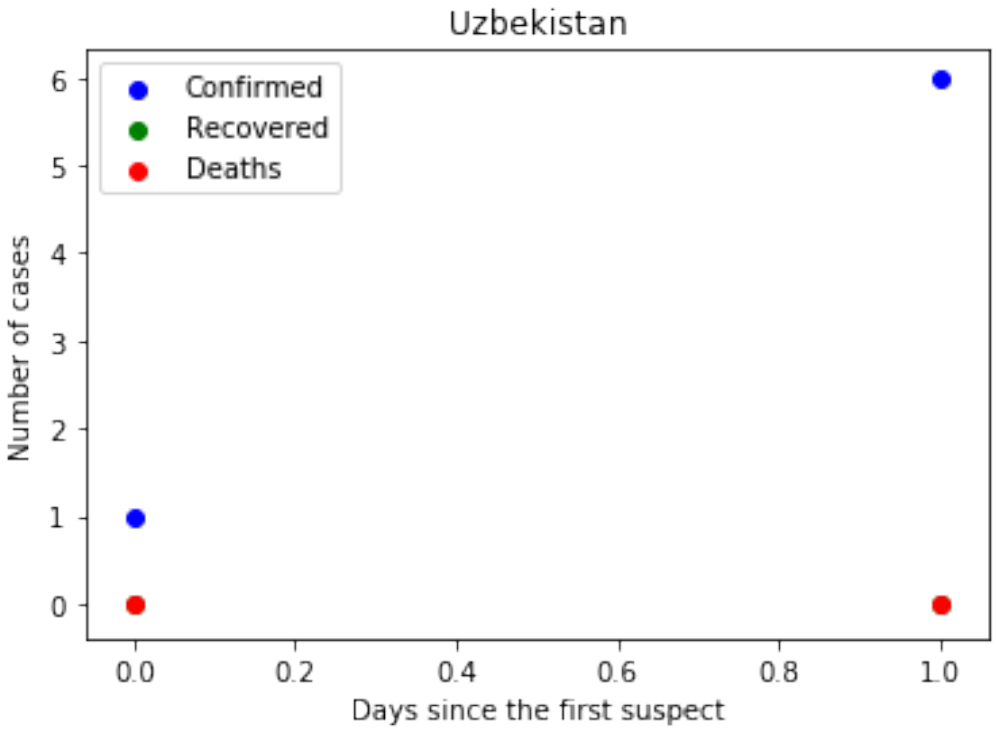

UK
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
200
400
600
800
1000
1200
1400
1600
0
10
20
30
40

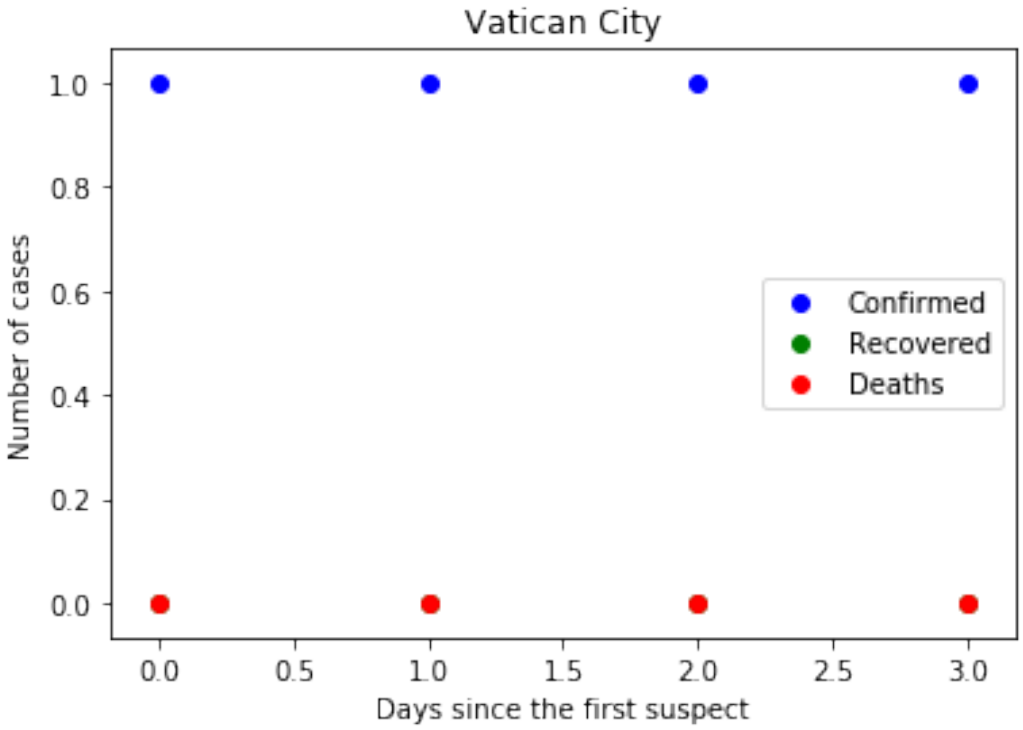

US
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
1000
2000
3000
4000
0
10
20
30
40
50

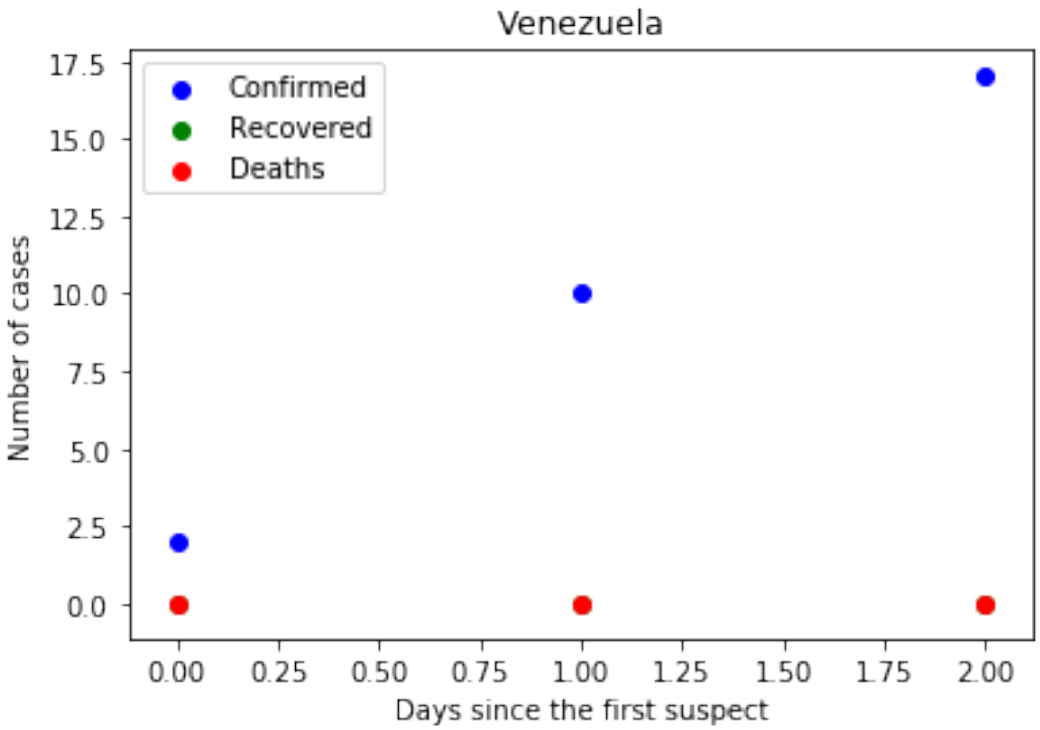

Ukraine
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
1
2
3
4
5
6
7
0
2
4
6
8
10
12

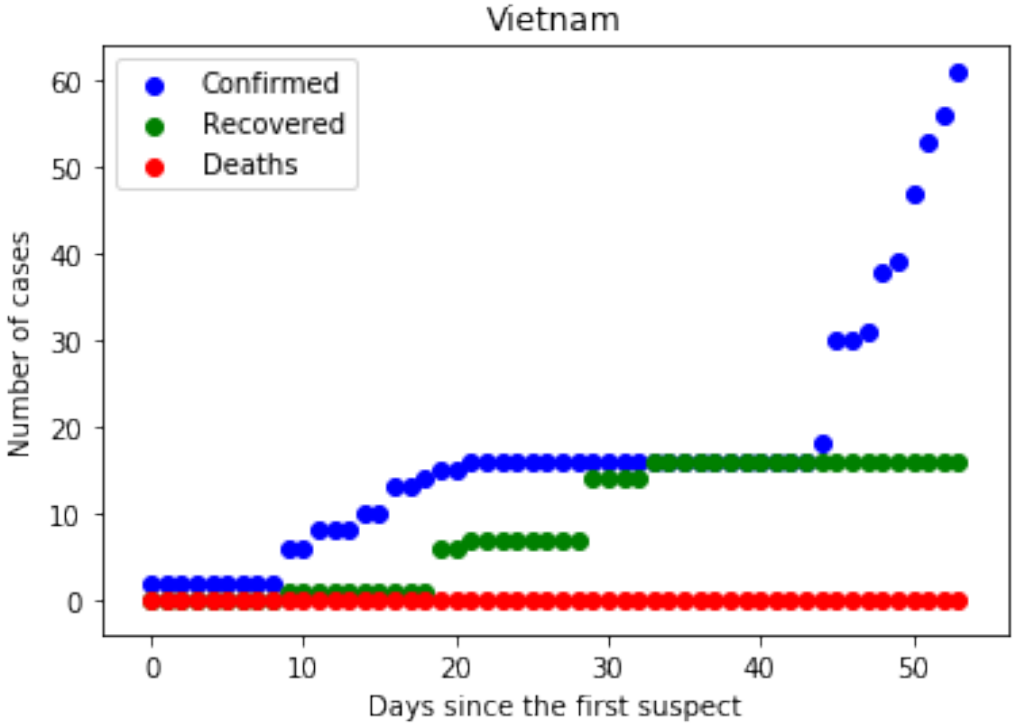

United Arab Emirates
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
20
40
60
80
100
0
10
20
30
40

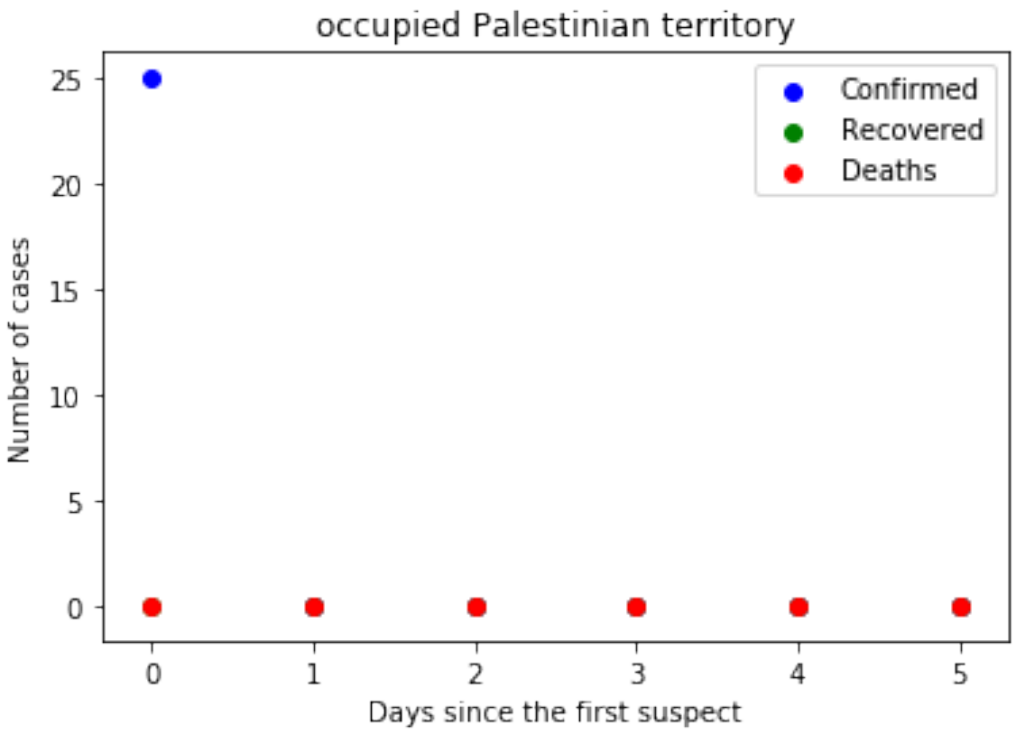

Uruguay
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
1
2
3
4
5
6
7
8
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
2.00


Uzbekistan
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0
1
2
3
4
5
6
0.0
0.2
0.4
0.6
0.8
1.0

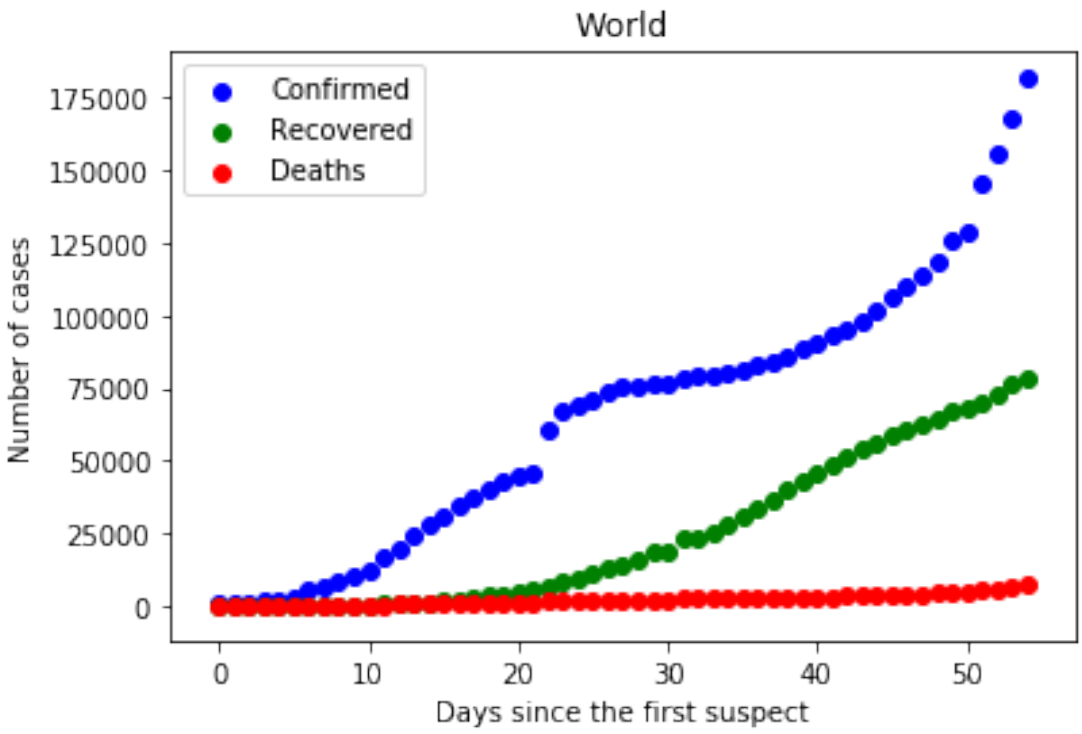

Vatican City
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
0.0
0.2
0.4
0.6
0.8
1.0
0.0
0.5
1.0
1.5
2.0
2.5
3.0


Venezuela
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
17.5
15.0
12.5
10.0
7.5
5.0
2.5
0.0
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
2.00


Vietnam
Confirmed
Recovered
Deaths
Number of cases
Days since the first suspect
60
50
40
30
20
10
0
0
10
20
30
40
50




```
df4 = df3.groupby(['Date'])
[['Date','Confirmed','Deaths','Recovered']].sum().reset_index()

C = df4
plt.scatter(np.arange(0,len(C)),C['Confirmed'],color='blue',label='Con
firmed')
plt.scatter(np.arange(0,len(C)),C['Recovered'],color='green',label='Re
covered')
plt.scatter(np.arange(0,len(C)),C['Deaths'],color='red',label='Deaths'
)
plt.title('World')
plt.xlabel('Days since the first suspect')
plt.ylabel('Number of cases')
plt.legend()
plt.show()
```


World
Confirmed
Recovered
Deaths
175000
150000
125000
100000
75000
50000
25000
0
Number of cases
0
10
20
30
40
50
Days since the first suspect