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EXPLORATORY DATA ANALYSIS USING EBOLA DATASET

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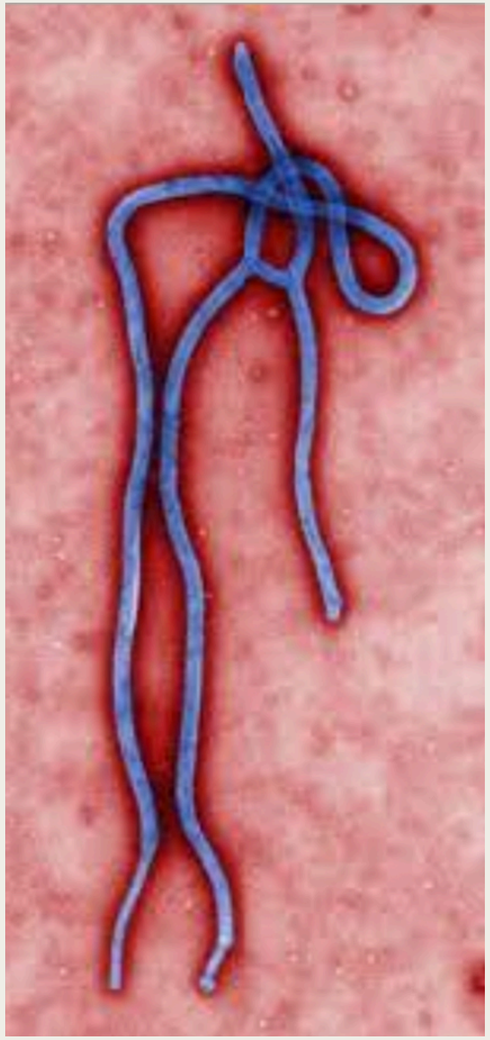
ABOUT EBOLA

What is Ebola?
Ebola virus disease (EVD), formerly known as Ebola haemorrhagic fever, is a rare but severe, often fatal illness in humans.

How does it spread?
The virus is transmitted to people from wild animals and spreads in the human population through human-to-human transmission.
Common example - Fruit Bats

What are the symptoms?
The Ebola virus causes an acute, serious illness that is often fatal if untreated.
Other symptoms include fever, fatigue, muscle pain, headache and sore throat.

How can it be treated?
A range of potential treatments including blood products, immune therapies and drug therapies are currently being evaluated.



DATASET USED

	A	B	C	D
1	**Country**	**Date**	**Cumulative no. of confirmed, probable and suspected cases**	**Cumulative no. of confirmed, probable and suspected deaths**
2	Guinea	29-08-2014	648	430
3	Nigeria	29-08-2014	19	7
4	Sierra Leone	29-08-2014	1026	422
5	Liberia	29-08-2014	1378	694
6	Sierra Leone	05-09-2014	1261	491
7	Nigeria	05-09-2014	22	8
8	Liberia	05-09-2014	1871	1089
9	Guinea	05-09-2014	812	517
10	Senegal	05-09-2014	1	0
11	Senegal	08-09-2014	3	0
12	Guinea	08-09-2014	862	555
13	Sierra Leone	08-09-2014	1361	509
14	Liberia	08-09-2014	2046	1224
15	Nigeria	08-09-2014	21	8
16	Guinea	12-09-2014	861	557
17	Sierra Leone	12-09-2014	1424	524
18	Nigeria	12-09-2014	21	8
19	Liberia	12-09-2014	2081	1137
20	Senegal	12-09-2014	3	0
21	Senegal	16-09-2014	1	0

INSTALLING AND IMPORTING LIBRARIES

Installing the 3 packages

```
In [1]: pip install pandas
```

```
In [2]: pip install matplotlib
```

```
In [3]: pip install seaborn
```

Importing the 3 libraries

```
In [4]: import pandas as pd
        import matplotlib.pyplot as plt
        import seaborn as sn
```

INSTALLING AND IMPORTING LIBRARIES

In [5]:
```
ebola = pd.read_csv(r"C:\Users\Anoorag\OneDrive\Desktop\eboladatatset.csv")
ebola.head()
```

Out[5]:

	Country	Date	Cumulative no. of confirmed, probable and suspected cases	Cumulative no. of confirmed, probable and suspected deaths
0	Guinea	29-08-2014	648.0	430
1	Nigeria	29-08-2014	19.0	7
2	Sierra Leone	29-08-2014	1026.0	422
3	Liberia	29-08-2014	1378.0	694
4	Sierra Leone	05-09-2014	1261.0	491

In [6]:
```
ebola = pd.read_csv(r"C:\Users\Anoorag\OneDrive\Desktop\eboladatatset.csv")
ebola.head(7)
```

Out[6]:

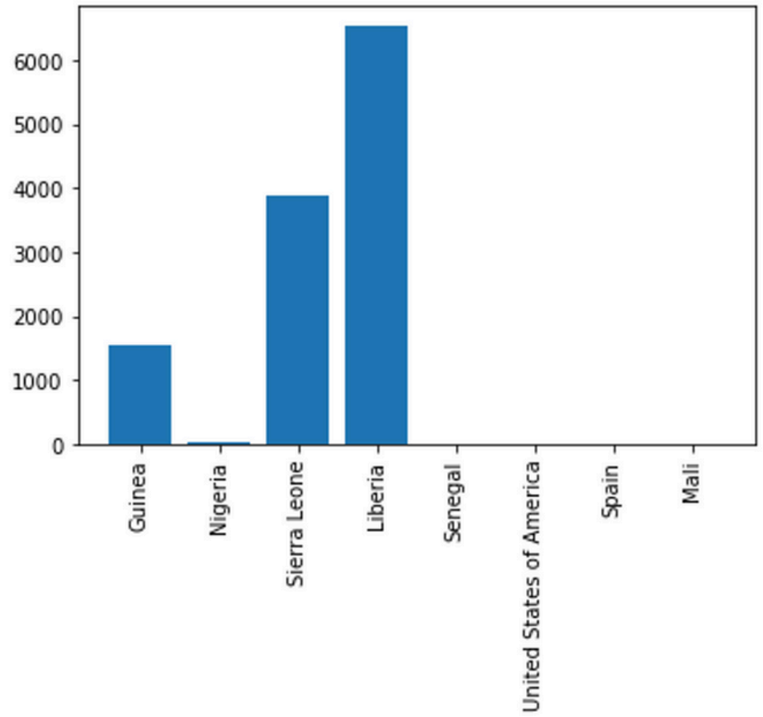
	Country	Date	Cumulative no. of confirmed, probable and suspected cases	Cumulative no. of confirmed, probable and suspected deaths
0	Guinea	29-08-2014	648.0	430
1	Nigeria	29-08-2014	19.0	7
2	Sierra Leone	29-08-2014	1026.0	422
3	Liberia	29-08-2014	1378.0	694
4	Sierra Leone	05-09-2014	1261.0	491
5	Nigeria	05-09-2014	22.0	8
6	Liberia	05-09-2014	1871.0	1089

USING MATPLOTLIB

Bar Graph

```
In [7]: c=ebola.head(100)
        plt.xticks(rotation='vertical')
        plt.bar(c["Country"],c["Cumulative no. of confirmed, probable and suspected cases"])
```

```
Out[7]: <BarContainer object of 100 artists>
```

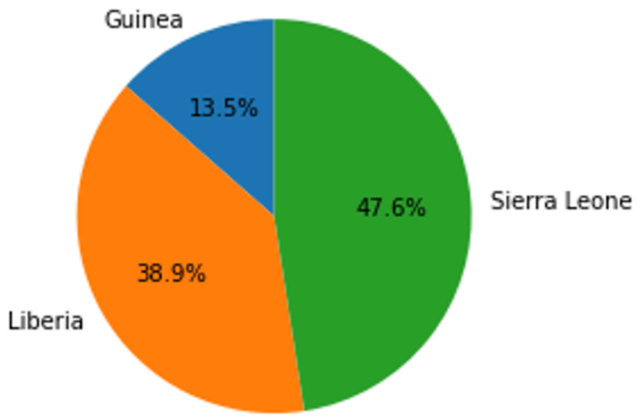


USING MATPLOTLIB

Pie Chart

In [8]:

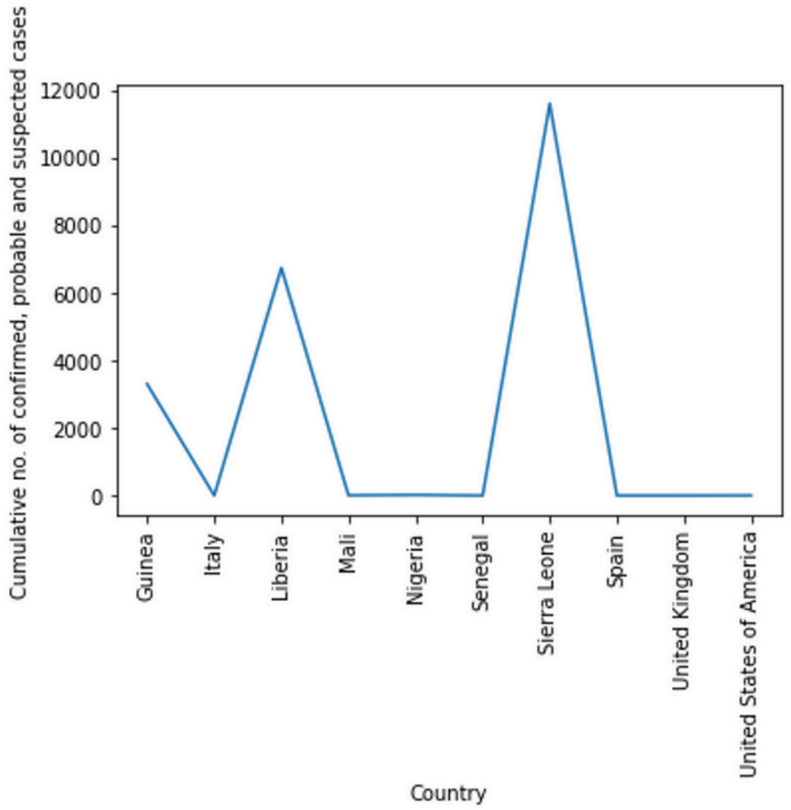
```
from matplotlib.pyplot import pie, axis, show
%matplotlib inline
df = pd.read_csv(r"C:\Users\Anoorag\OneDrive\Desktop\eboladatatset.csv")
sums = (df.loc[df["Cumulative no. of confirmed, probable and suspected cases"]>=500]).groupby(df["Country"])["Cumulative no.
axis('equal');
pie(sums, labels=sums.index, startangle=90, autopct='%.1f%%');
show()
```



USING SEABORN

Line Graph 1

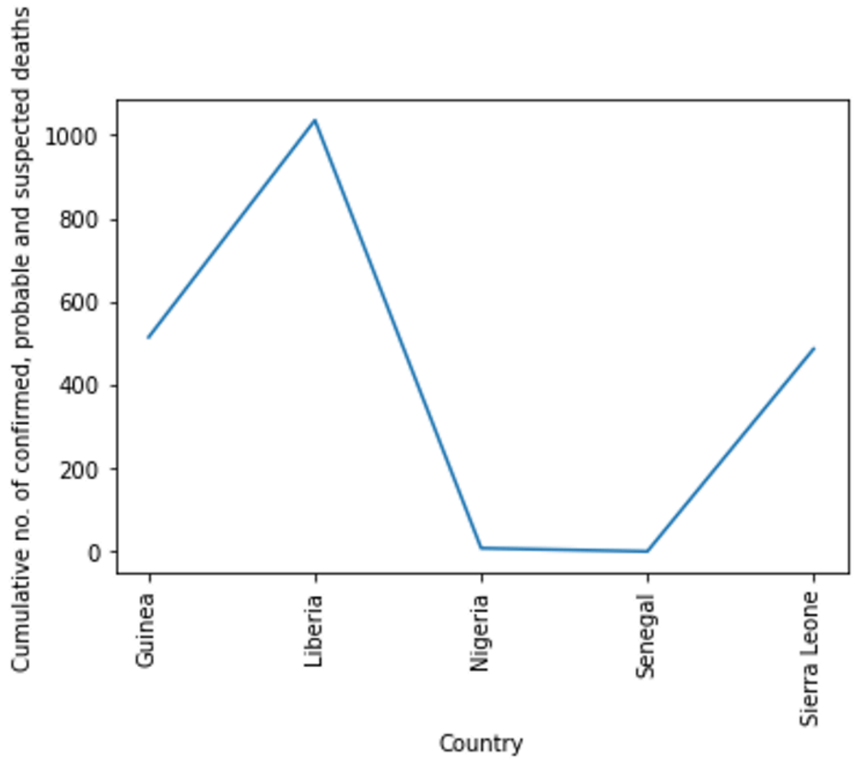
```
In [9]: plt.xticks(rotation=90)
        ax = sn.lineplot(x="Country", y="Cumulative no. of confirmed, probable and suspected cases", ci=None, data = ebola)
```



USING SEABORN

Line Graph 2

In [10]:
```
c=ebola.head(20)
plt.xticks(rotation=90)
ax=sn.lineplot(x="Country", y="Cumulative no. of confirmed, probable and suspected deaths", ci=None, data=c)
```



```
print("THANK YOU")
```

```
THANK YOU
```