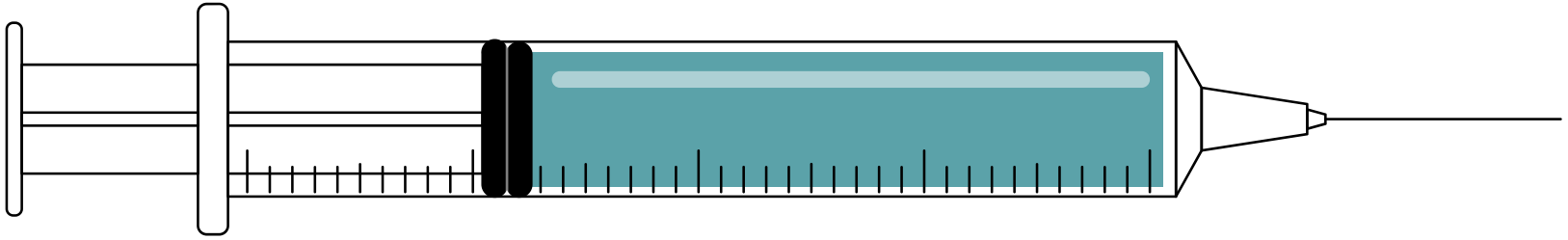
COVID 19 CASES ANALYSIS



TEAM MEMBERS

R.VISHNU C.PRIYA DHARSINI P.VINOTH KUMAR S.SUJITHKUMAR A.STEPHEN KOVIL PILLAI

INTRODUCTION

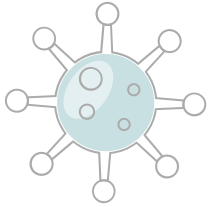
IN THIS PRESENTATION ,WE ANALYSE AND CREATE A CHARTS AND GRAPHS BY USING IBM COGNOS ANALYZE THE VISUALIZATIONS TO IDENTIFY TRENDS,VARIATIONS,AND POTENTIAL CORRELATIONS BETWEEN CASES AND DEATHS.

EXPLORE AND VISUALIZING

YOU CAN ALSO USE VARIOUS CHARTS AND GRAPHS, SUCH AS HISTOGRAMS, SCATTER PLOTS, BOX PLOTS, AND HEAT MAPS, TO DISPLAY THE DATA. BY EXPLORING AND VISUALIZING THE DATA, YOU CAN IDENTIFY POTENTIAL PATTERNS AND TRENDS, SUCH AS OUTLIERS, CLUSTERS, CORRELATIONS, AND CHANGES OVER TIME

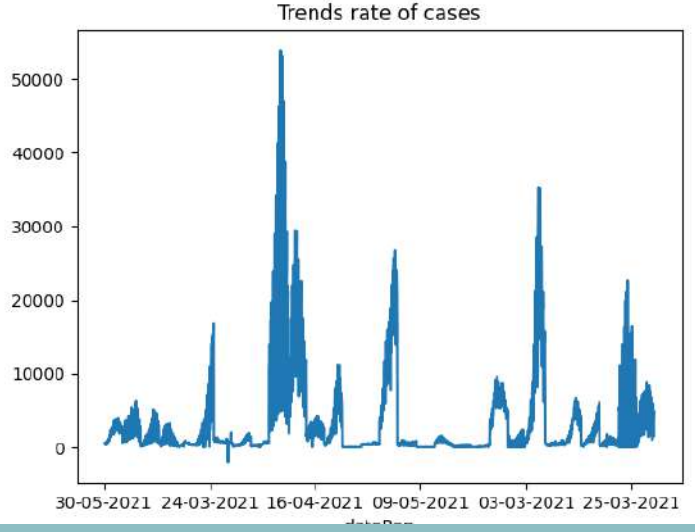
TRENDS RATE

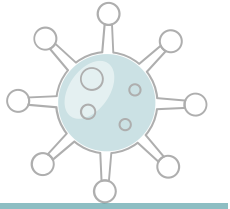
TO DETECT AN INCREASING TREND USING LINEAR REGRESSION, YOU CAN FIT A LINEAR REGRESSION MODEL TO THE TIME SERIES DATA AND PERFORM A STATISTICAL TEST ON THE ESTIMATED COEFFICIENT (SLOPE). IF THE COEFFICIENT IS SIGNIFICANTLY POSITIVE, IT INDICATES THAT THE TIME SERIES HAS AN INCREASING TREND.19-MAY-2023



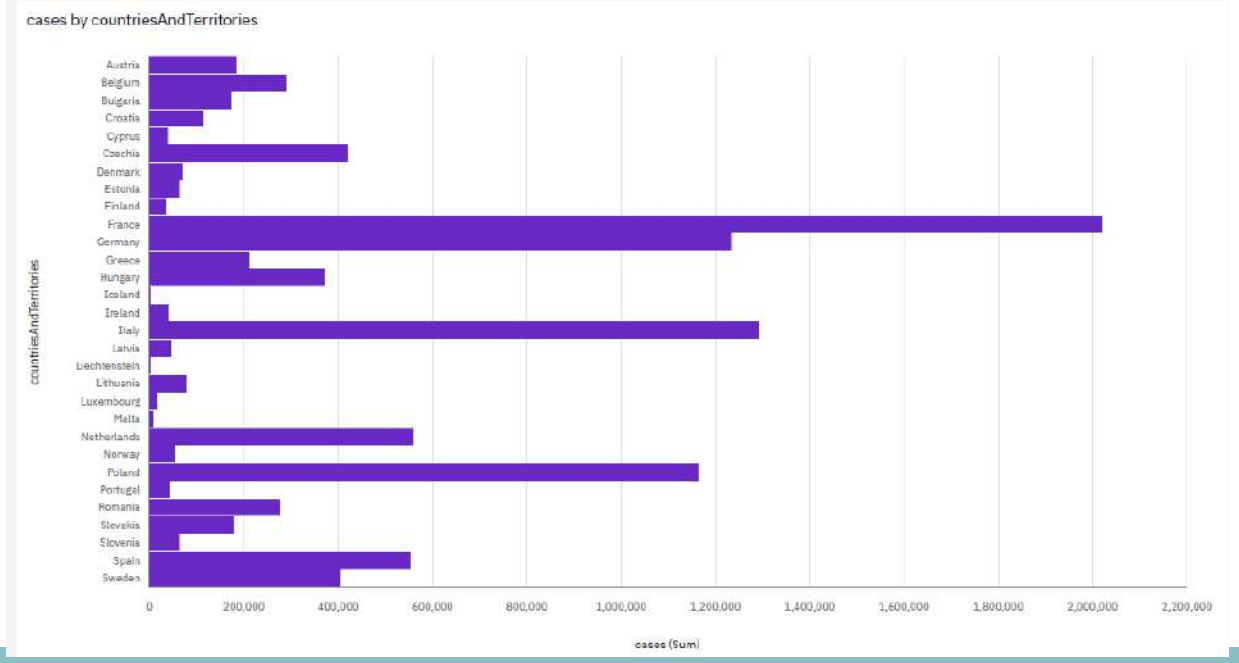
VISUALIZING TRENDS RATE

```
plt.title("Trends rate of cases")
selected.plot()
plt.show()
```

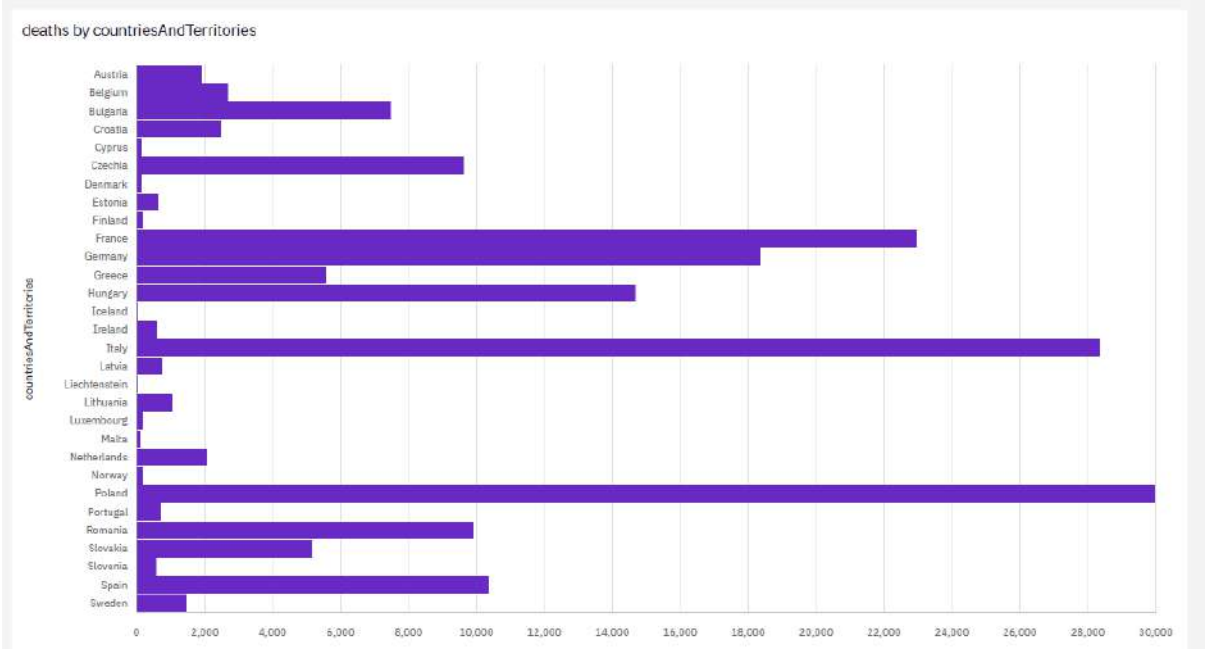


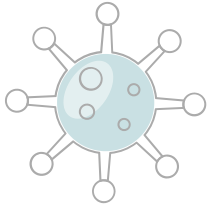


TRENDS RATE OF CASES

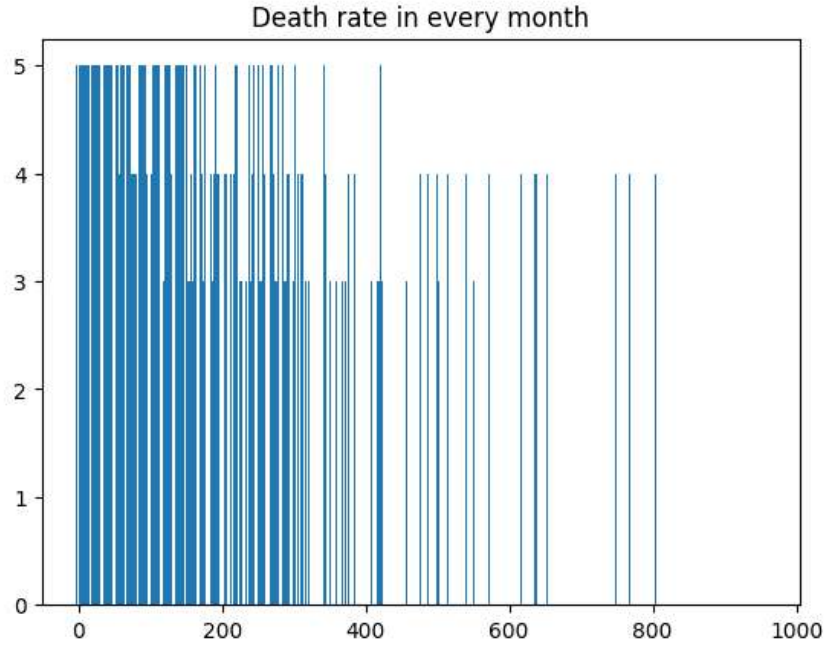


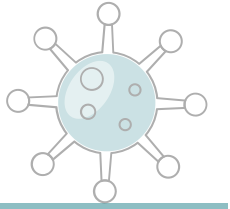
TRENDS RATE OF DEATHS

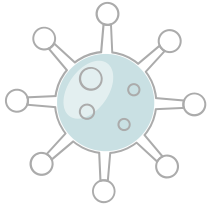




[62]:
```
plt.bar(org,org2)
plt.title("Death rate in every month")
plt.show()
```

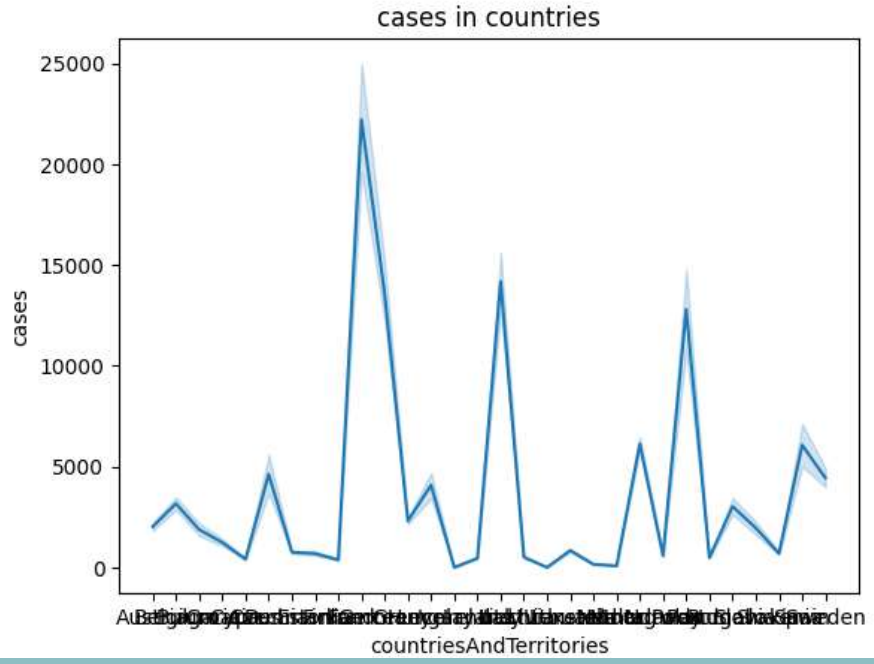


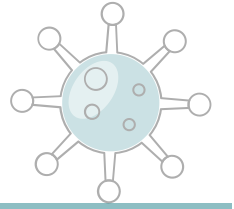




[8]:
```
import seaborn as sns
plt.title("cases in countries")
sns.lineplot(x=y,y=x,data=fcdata)
```

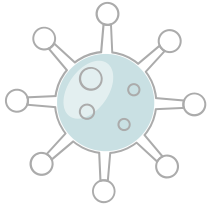
[8]:
```
<Axes: title={'center': 'cases in countries'}, xlabel='countriesAndTerritories', ylabel='cases'>
```





VARIATIONS IN DATASET

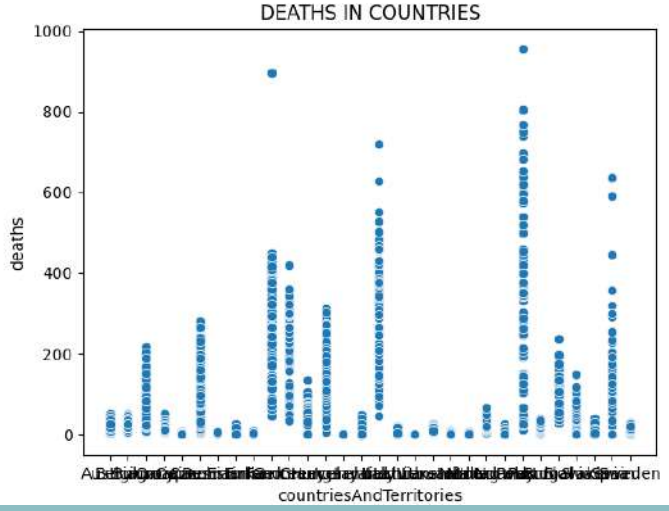
STANDARD DEVIATION, STD OR STDEV, IS A DESCRIPTIVE STATISTIC THAT MEASURES THE DISPERSION OF A DATASET RELATIVE TO ITS MEAN AND IS CALCULATED AS THE SQUARE ROOT OF THE VARIANCE

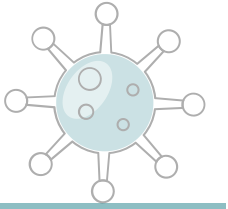


VISUALIZING VARIATIONS

```
[9]: z=fcdata.deaths
     plt.title("DEATHS IN COUNTRIES")
     sns.scatterplot(x=y,y=z,data=fcdata)
```

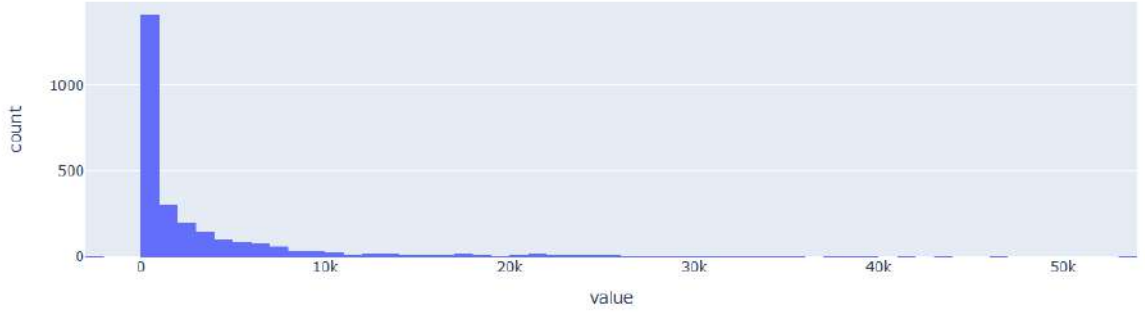
```
[9]: <Axes: title={'center': 'DEATHS IN COUNTRIES'}, xlabel='countriesAndTerritories', ylabel='deaths'>
```





VISUALIZING VARIATIONS

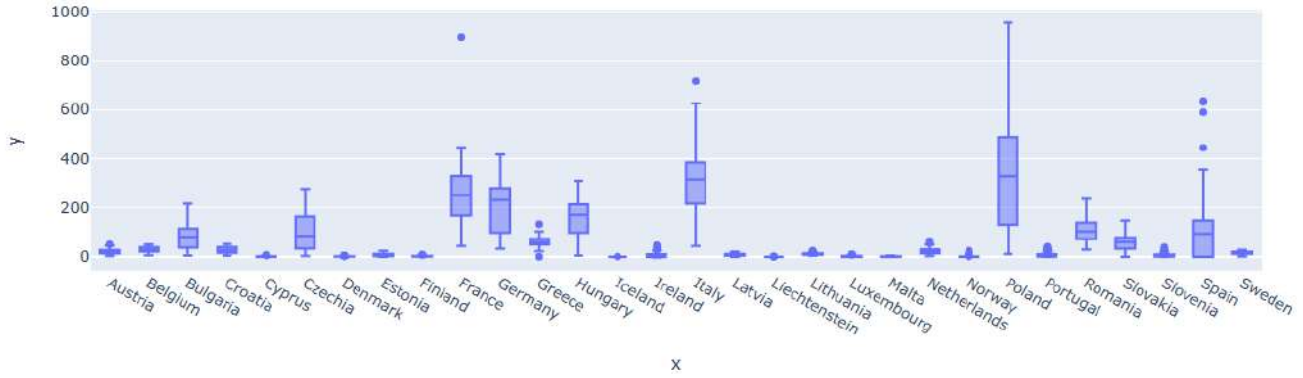
```
[19]: fig=px.histogram(fcdata.cases)
      fig.show()
```




```
[ ]:
```

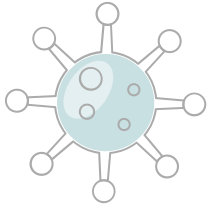
VISUALIZING VARIATIONS

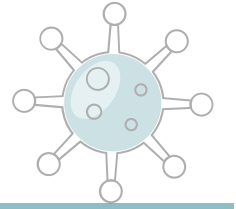
```
]: import plotly.express as px
   fig=px.box(x=y,y=z)
   fig.show()
```

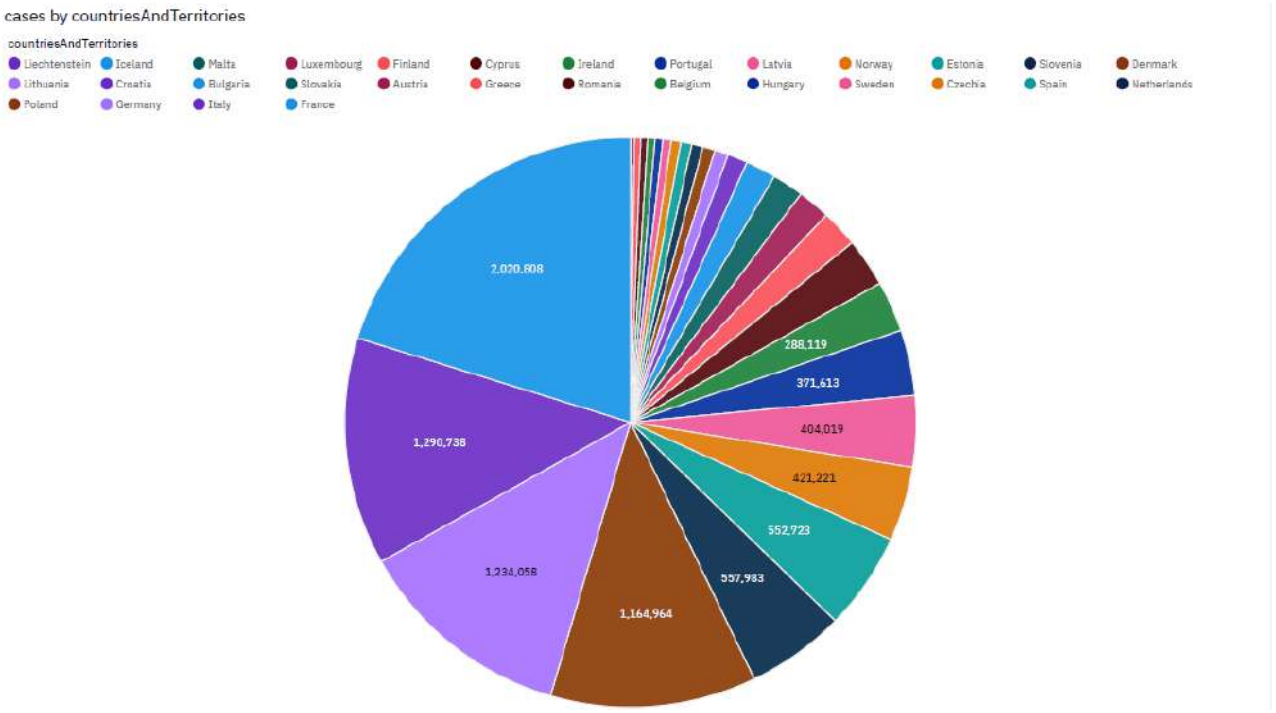


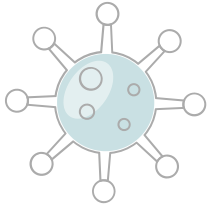
POTENTIAL CORRELATION IN DATASET

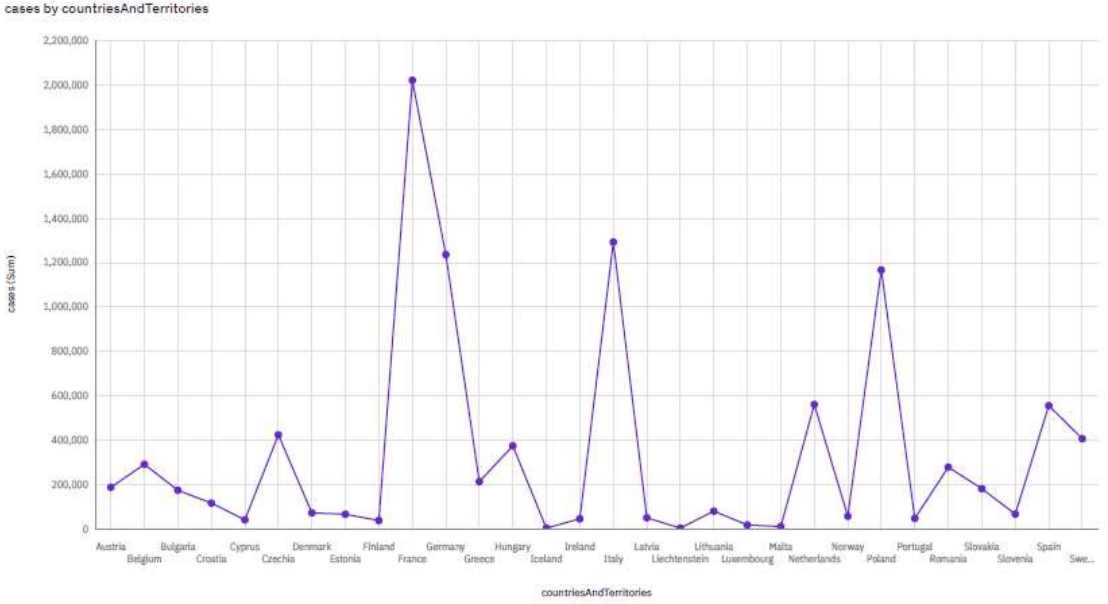
CORRELATION ANALYSIS IS USED TO STUDY PRACTICAL CASES. HERE, THE RESEARCHER CAN'T MANIPULATE INDIVIDUAL VARIABLES. FOR EXAMPLE , CORRELATION ANALYSIS IS USED TO MEASURE THE CORRELATION BETWEEN THE PATIENT'S BLOOD PRESSURE AND THE MEDICATION USED. MARKETERS USE IT TO MEASURE THE EFFECTIVENESS OF ADVERTISING.

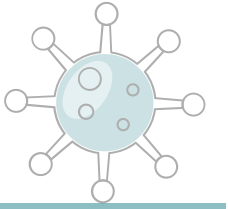


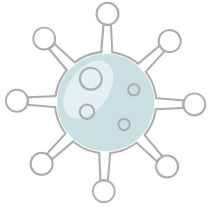


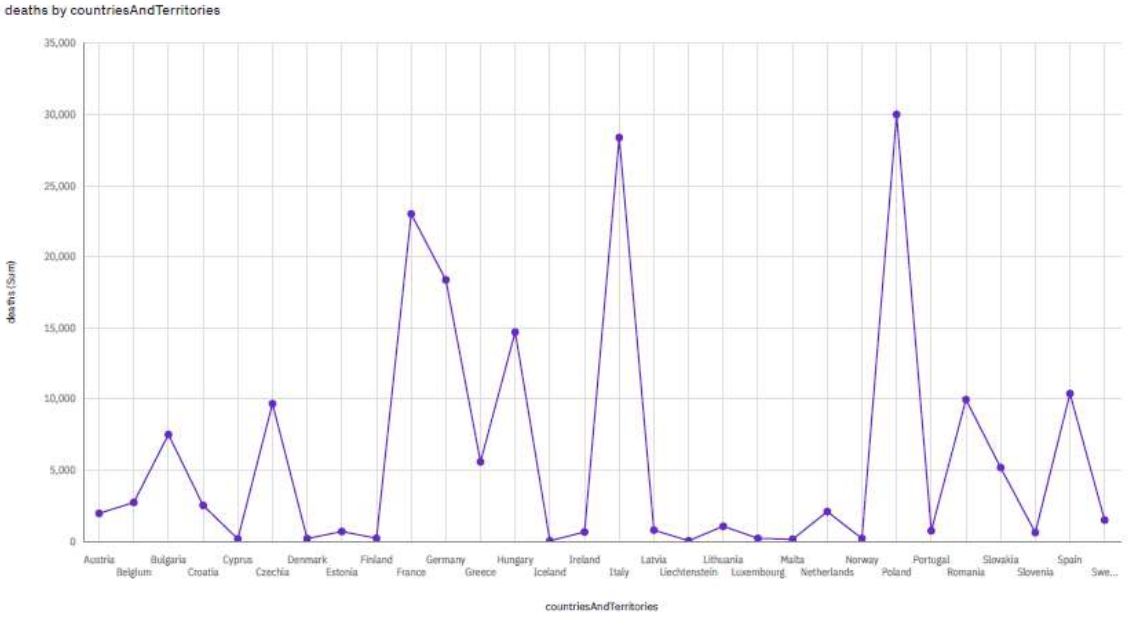

cases by countriesAndTerritories
countriesAndTerritories
Liechtenstein
Iceland
Malta
Luxembourg
Finland
Cyprus
Ireland
Portugal
Latvia
Norway
Estonia
Slovenia
Denmark
Lithuania
Croatia
Bulgaria
Slovakia
Austria
Greece
Romania
Belgium
Hungary
Sweden
Czechia
Spain
Netherlands
Poland
Germany
Italy
France
2,020,808
1,290,738
1,234,058
1,164,964
557,983
552,723
421,221
404,019
371,613
288,119

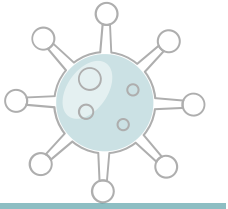


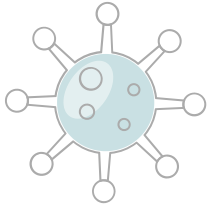

cases by countriesAndTerritories
cases (Sum)
2,200,000
2,000,000
1,800,000
1,600,000
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
Austria
Belgium
Bulgaria
Croatia
Cyprus
Czechia
Denmark
Estonia
Finland
France
Germany
Greece
Hungary
Iceland
Ireland
Italy
Latvia
Liechtenstein
Lithuania
Luxembourg
Malta
Netherlands
Norway
Poland
Portugal
Romania
Slovakia
Slovenia
Spain
countriesAndTerritories

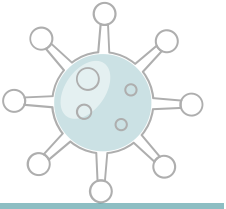





deaths by countriesAndTerritories
deaths (Sum)
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
Austria
Belgium
Bulgaria
Croatia
Cyprus
Czechia
Denmark
Estonia
Finland
France
Germany
Greece
Hungary
Iceland
Ireland
Italy
Latvia
Liechtenstein
Lithuania
Luxembourg
Malta
Netherlands
Norway
Poland
Portugal
Romania
Slovakia
Slovenia
Spain
Swe...
countriesAndTerritories







cases

cases

Nodes

All

Croatia, Cyprus ... (13 ...

Austria, Belgium ... (4 o...

Czechia, Hungary ... (3...

month

5

4, 3

countriesAnd...

Germany, Italy ... (1 oth...

month

5

day

31, 30 ... (18 others)

14, 13 ... (9 others)

4, 3

deaths

[8, 103)

≥ 103

France

month

5

4, 3

day

29, 28 ... (14 others)

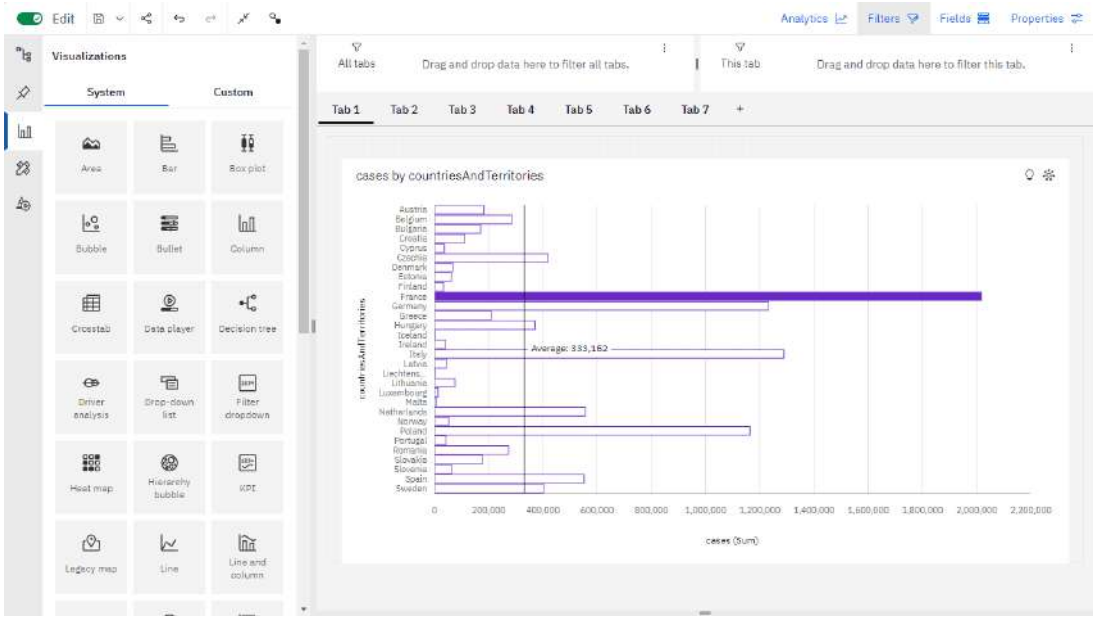
31, 30 ... (13 others)

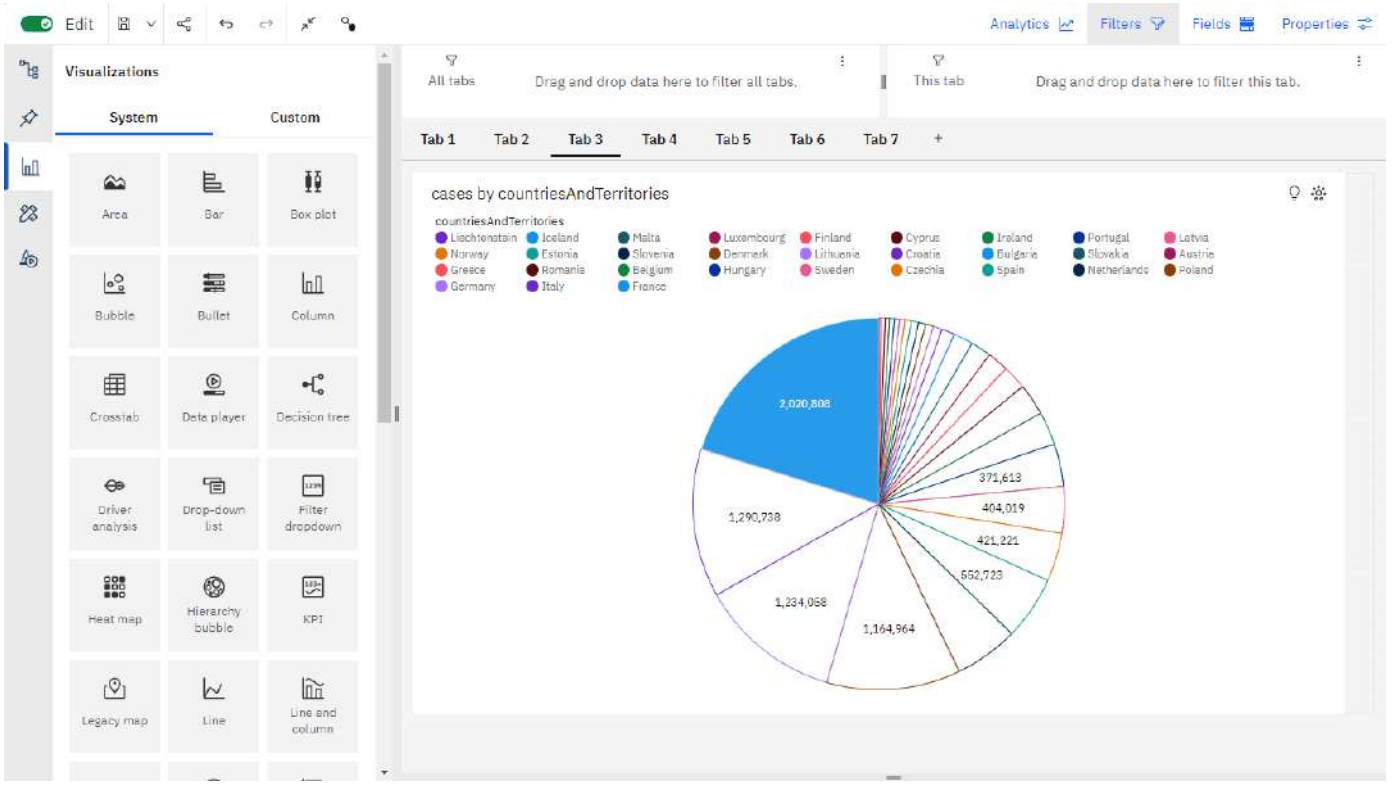
INSIGHTS IN IBM COGNOS

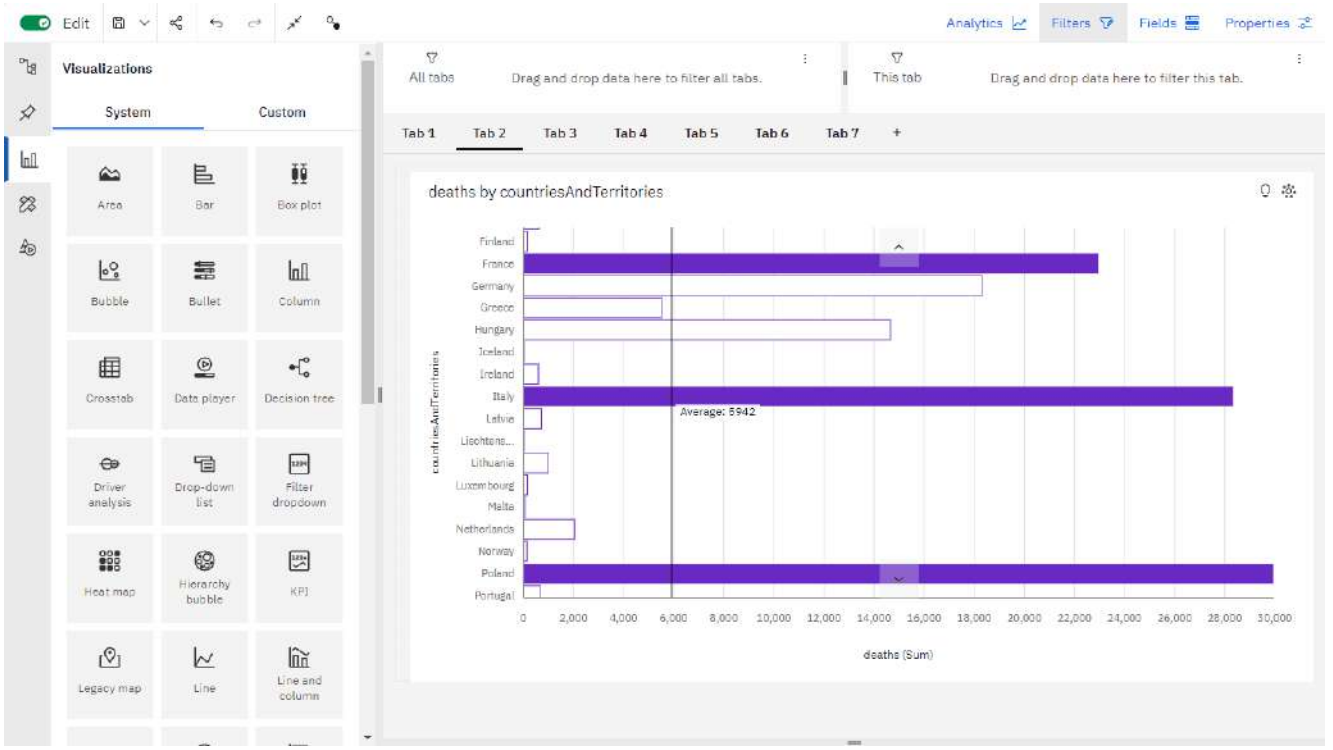
IBM COGNOS INSIGHT PROVIDES ALL THE TOOLS YOU NEED TO SOLVE INDIVIDUAL OR TEAM CHALLENGES QUICKLY AND EASILY, RIGHT FROM YOUR DESKTOP.

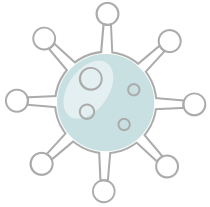
- IMPORT AND MERGE YOUR CORPORATE ENTERPRISE DATA WITH PERSONAL LOCAL DATA DIRECTLY IN YOUR WORKSPACE.
- SLICE, DICE AND DRILL DOWN THROUGH DATA QUICKLY WITHOUT SCRIPTING.

VISUALIZATION OF INSIGHTS




Edit
Analytics
Filters
Fields
Properties
Visualizations
System
Custom
Area
Bar
Box plot
Bubble
Bullet
Column
Crosstab
Data player
Decision tree
Driver analysis
Drop-down list
Filter dropdown
Heat map
Hierarchy bubble
KPI
Legacy map
Line
Line and column
All tabs
Drag and drop data here to filter all tabs.
This tab
Drag and drop data here to filter this tab.
Tab 1
Tab 2
Tab 3
Tab 4
Tab 5
Tab 6
Tab 7
cases by countriesAndTerritories
countriesAndTerritories
Liechtenstein
Iceland
Malta
Luxembourg
Finland
Cyprus
Ireland
Portugal
Latvia
Norway
Estonia
Slovenia
Denmark
Lithuania
Croatia
Bulgaria
Slovakia
Austria
Greece
Romania
Belgium
Hungary
Sweden
Czechia
Spain
Netherlands
Poland
Germany
Italy
France
2,020,808
371,613
404,019
421,221
552,723
1,164,964
1,234,058
1,290,738


Edit
Analytics
Filters
Fields
Properties
Visualizations
System
Custom
Area
Bar
Box plot
Bubble
Bullet
Column
Crosstab
Data player
Decision tree
Driver analysis
Drop-down list
Filter dropdown
Heat map
Hierarchy bubble
KPI
Legacy map
Line
Line and column
All tabs
Drag and drop data here to filter all tabs.
This tab
Drag and drop data here to filter this tab.
Tab 1
Tab 2
Tab 3
Tab 4
Tab 5
Tab 6
Tab 7
+
deaths by countriesAndTerritories
countriesAndTerritories
Finland
France
Germany
Greece
Hungary
Iceland
Ireland
Italy
Latvia
Liechtens...
Lithuania
Luxembourg
Malta
Netherlands
Norway
Poland
Portugal
Average: 5942
0
2,000
4,000
6,000
8,000
10,000
12,000
14,000
16,000
18,000
20,000
22,000
24,000
26,000
28,000
30,000
deaths (Sum)



CONCLUSION

THE COVID-19 PANDEMIC HAS HAD A SIGNIFICANT IMPACT ON THE WORLD. IT HAS HIGHLIGHTED THE IMPORTANCE OF PREPAREDNESS, COLLABORATION, AND INNOVATION. WHILE THE FUTURE OUTLOOK IS UNCERTAIN, WE HAVE LEARNED MANY LESSONS THAT WILL HELP US BETTER PREPARE FOR FUTURE PANDEMICS.