

A Project Report on
Covid Data Analysis

Course Code:BCA-EC401

Course Name: Data Science using python

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Submitted to:

Mrs. Bushra Jamal



Dwarka sec-9, New Delhi

(Bachelor of Computer Application)

Certificate

This project is for the department of Bachelor of computer Application, under faculty of computer science and engineering at **Delhi skill and Entrepreneurship University**, the project entitled **Covid data analysis** in satisfactory manner as a partial fulfillment of required degree of bachelor of computer application for the academic year 2024, of DSEU Dwarka Campus

This is to certify that **Aman Singh(41222121)**, and **Kunal(41222140)** has contributed in successfully completing the project

Acknowledgement

We would like to thank **Mrs. Bushra Jamal**, our Professor-in-charge for their support and guidance in completing our project on the topic **Covid Data Analysis**. It was a great learning experience.

We are also thankful to our parents and friend for their constant encouragement and cooperation through out this project. Without the contribution of group members the project have not been completed so, thankful to each of group members who fairly contributed to the project.

Aman Singh (4122121)

Kunal (41222140)

Abstract of the Project

The COVID-19 pandemic has spurred a global effort to collect and analyze vast amounts of data. This project delves into this data to glean crucial insights into the virus's spread, treatment, and prevention.

We aim to utilize techniques like statistical analysis, data visualization , and dashboard to:

- Identify trends and patterns in confirmed cases, fatalities, and recovery rates across various regions.
- Explore correlations between COVID-19 and factors like demographics, population density, and implemented public health interventions.

By extracting knowledge from this data, this project aspires to empower policymakers, healthcare professionals, and the general public with the information needed to navigate the challenges of COVID-19 and work towards mitigating its impact.

- Depending on the specific focus of your project, you can modify the abstract to highlight additional aspects, such as:-
- Analyzing the efficacy of various vaccines or treatment protocols.
- Investigating the emergence and spread of new COVID-19 variants.
- Assessing the socioeconomic impact of the pandemic.

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1. Introduction

a. About the project idea:

The COVID-19 pandemic has left an undeniable mark on the world. As we navigate a complex new normal, data analysis offers a powerful tool to understand the past, assess the present, and potentially predict future trends. This project delves into the realm of COVID-19 data analysis, aiming to extract valuable insights that can inform public health strategies, resource allocation, and our overall response to the virus.

b. About tools in use:

The project utilizes a combination of tools and technologies to achieve its objectives. This includes programming languages such as Python for data preprocessing, analysis, and dashboard development. We will use power bi and multiple python libraries like Pandas, NumPy, Matplotlib, Seaborn and plotly for data manipulation, analysis, and visualization. The use of open-source tools provides us better flexibility, scalability, and customization,

Resources Required:

Covid order dataset

Python programming language

Jupyter Notebook or similar IDE

Power bi

Access to computational resources for model training (e.g., CPU/GPU)

Libraries: Pandas, NumPy, Matplotlib, Seaborn, Plotly

c. About data science:

Data science, along with statistical analysis, computer science, and computational biology, has been driving critical applications in epidemiology, drug discovery, and molecular design for COVID-19

Data-driven, mathematical, and predictive models have provided valuable insights into the spread of COVID-19, risk factors, and strategies for living with the endemic virus

2. Purpose/Scope/Objective of the Analysis

Purpose: The COVID-19 pandemic has spurred a global effort to collect and analyze vast amounts of data. This project delves into this data to glean crucial insights into the virus's spread, treatment, and prevention.

Scope: The scope of the report will vary depending on the specific objectives and resources available. Here are some factors to consider:

Data sources: Specify the data sources used in the analysis, such as World Health Organization (WHO) reports, national health agencies, or local case data.

Geographic focus: Define the geographic area covered in the report, whether it's global, regional, national, or local.

Timeframe: Specify the timeframe for the data analysis.

Data analysis methods: Outline the statistical methods used to analyze the data, such as time series analysis, spatial analysis, or regression modelling

Objectives: The objective of a COVID-19 data analysis report is to extract meaningful insights from the vast amount of data collected during the pandemic. This can involve understanding the spread of the virus, identifying risk factors, evaluating the effectiveness of interventions, and informing public health decisions.

3. Requirements for the Project

a. **Hardware used:** While the hardware requirements are not overly demanding, a computer with sufficient processing power and RAM (depending on dataset size) will ensure smooth workflow.

Processor: Intel core i5

RAM: 12 GB

Storage : 512 GB SSD

b. **Software used:**

- **Python Programming Language:** Python serves as the primary programming language for data preprocessing, analysis, and model development.

- **Integrated Development Environment (IDE):** IDEs such as Jupyter Notebook or PyCharm are commonly used for coding and experimentation.

- **Data Science Libraries:** Libraries such as Pandas, NumPy, matplotlib, seaborn, and plotly are essential for data manipulation, data visualization and learning.

- **Visualization Libraries:** Matplotlib ,Plotly and Seaborn are used for data visualization to gain insights into the data and model performance.

- **Visualization tool :** Microsoft Power BI is a business intelligence tool that allows you to visualize and analyze data.

c. **Technology used:** Access to the restaurant's historical data (ideally in a well-structured format like CSV).Data science methodologies, including data preprocessing, exploratory data analysis (EDA), statistical analysis.

4. Methodology

a. Introduction:

Brief introduction to the methodology employed in the project.Overview of the steps involved in analyzing the covid order dataset and its representation. Explanation of the rationale behind the chosen approach and its relevance to achieving the project objectives.The methodology section outlines the step-by-step approach to analyzing the covid data and extracting valuable insights.

b. General Description:

The general workflow will encompass data acquisition, cleaning (handling missing values, inconsistencies), exploration (understanding overall trends and patterns), feature engineering (creating new informative features), data visualization (communicating insights through charts and graphs), and potential model building (predicting future trends, customer preferences) if deemed necessary within the project's scope.

c. Specific Requirements, Functions, and Formulas:

Data Acquisition: Methods will vary depending on data source; likely involving CSV file import or database interaction with Python libraries.

Data Cleaning: Techniques like handling missing values with techniques like mean/median imputation, removing outliers, and identifying data inconsistencies using statistical methods and visualizations.

Data Exploration: Descriptive statistics, data visualization libraries for uncovering patterns and trends, understanding customer demographics if available, and analyzing menu performance.

Data Visualization (throughout the process): Create compelling visualizations like bar charts, scatter plots, and time series plots to communicate insights effectively.

Dashboard using power bi.

d. Analysis Results:

- Analyze the trend of cases, recoveries, and deaths over time globally, or for specific regions/countries.
- Visualize the geographical distribution of cases, deaths, and recoveries on a map to identify hotspots and trends across different regions.
- Calculate and compare the mortality rate (deaths/cases) across different regions or demographics.

5.Coding and Output:

data cleaning

```
import pandas as pd

df = pd.read_csv('C:/Users/AMAN/Desktop/covid.csv')

df

df.columns

df.shape

df.count()

df.isnull()

df.isnull().sum()

a = df['New cases'].median()

print("median of New caese column - ",a)

b = df['New deaths'].median()

print("median of New deaths column - ",b)

c = df['New recovered'].median()

print("median of New recovered column - ",c)

df["New cases"].fillna(a, inplace = True)

df["New deaths"].fillna(b, inplace = True)

df["New recovered"].fillna(c, inplace = True)

df.isnull()

df.duplicated()

df.drop_duplicates(inplace = True)

print(df.duplicated())

df
```

insights from data

```
df.describe()
```

```
df.info()
```

```
total = df['Confirmed'].sum()
```

```
print("Total number of covid confirmed cases in the world - ",total)
```

```
death = df['Deaths'].sum()
```

```
print("Total number of death due to covid in the world",death)
```

```
recovered = df['Recovered'].sum()
```

```
print("Total number of recovered cases from covid in the world",recovered)
```

```
active = df['Active'].sum()
```

```
print("Total number of Active cases in the world",death)
```

```
df.sum()
```

```
df['Active/Deaths Ratio']=(df['Active']/df['Deaths'])
```

```
df
```

```
df['Confirmed/Recovered Ratio']=(df['Confirmed']/df['Recovered'])
```

```
df
```

```
T1 = df.sort_values(by=['Confirmed'], ascending=False).head(10)
```

```
T1
```

```
T = df.sort_values(by=['Confirmed'])
```

```
T.head(10)
```

```
D = df.sort_values(by=['Deaths'], ascending=False).head(10)
```

```
D
```

```
T = df.sort_values(by=['Deaths'])
```

```
T.head(10)
```

```
R = df.sort_values(by=['Recovered'], ascending=False).head(10)
```

```
R
```

```
R = df.sort_values(by=['Recovered']).head(10)
```

Visualization

```
import matplotlib.pyplot as plt
import seaborn as sns

g = df.groupby('WHO Region').sum()
explode = [0.03, 0.02, 0.02, 0.02, 0.1, 0.03]
plt.figure(figsize=(7,7))
color=['lightsteelblue','aquamarine','orange','lightcoral','tan','plum']

plt.pie(g['Confirmed'], labels=['Africa','Americas','Eastern Mediterranean','Europe','South-East
Asia','Western Pacific']
        , colors=color, autopct='%.0f%%', explode=explode,shadow = True)

plt.title('percentage of Confirmed cases in each region',size=20,color='dimgrey')
plt.legend(loc='upper right')
plt.show()

import matplotlib.pyplot as plt
import seaborn as sns

explode = [0.03, 0.02, 0.02, 0.02, 0.1, 0.03]
plt.figure(figsize=(7,7))
color=['lightsteelblue','aquamarine','orange','lightcoral','tan','plum']

plt.pie(g['Deaths'], labels=['Africa','Americas','Eastern Mediterranean','Europe','South-East
Asia','Western Pacific']
        , colors=color, autopct='%.0f%%', explode=explode,shadow = True)

plt.title('percentage of Deaths in each region',size=20,color='dimgrey')
plt.legend(loc='upper right')
plt.show()

x=df['Confirmed'].sum()
y=df['Active'].sum()
z=df['Recovered'].sum()
p=df['Deaths'].sum()

print(x,y,z,p)
```

```

import plotly.express as px

fig = px.pie(df, values=[x,y,z,p], names=['Total Confirmed cases','Active','Recovered cases','Deaths'], title='Covid cases Distribution')

fig.update_layout(width=700, height=550)

fig.show()

import plotly.express as px

fig = px.bar(T1, x='Country/Region', y='Confirmed'

              ,title='Top 10 country in the world with Confirmed cases',color='Confirmed')

fig.update_layout(height=600)

fig.show()

import plotly.express as px

fig = px.bar(D, x='Country/Region', y='Deaths'

              ,title='Top 10 country in the world with Deaths cases',color='Country/Region')

fig.update_layout(height=600)

fig.show()

import plotly.express as px

fig = px.bar(R, x='Country/Region', y='Recovered'

              ,title='Top 10 country in the world with Rcovered cases',color='Recovered')

fig.update_layout(height=600)

fig.show()

W = df.sort_values(by=['Confirmed'], ascending=False).head(20)

z= df.sort_values(by=['Deaths / 100 Cases'], ascending=False).head(20)

x = df.sort_values(by=['Recovered / 100 Cases'], ascending=False).head(20)

s = df.sort_values(by=['Deaths / 100 Recovered'], ascending=False).head(20)

import plotly.express as px

fig=px.line(W, x='Country/Region', y='1 week change',markers=True

            ,title='Last one week change in Top 20 Country')

fig.update_layout(height=600)

fig.show()

```

```

import plotly.express as px
fig=px.line(z, x='Country/Region', y='Deaths / 100 Cases',markers=True
            ,title='Deaths / 100 Cases of Top 20 Country')
fig.update_layout(height=600)
fig.show()

import plotly.express as px
fig=px.line(x, x='Country/Region', y='Recovered / 100 Cases',markers=True
            ,title='Recovered / 100 Cases of Top 20 Country')
fig.update_layout(height=600)
fig.show()

import plotly.express as px
fig=px.line(s, x='Country/Region', y='Deaths / 100 Recovered',markers=True
            ,title='Deaths / 100 Recovered of Top 20 Country')
fig.update_layout(height=600)
fig.show()

import plotly.express as px
fig = px.choropleth(df, locations='Country/Region',locationmode='country names',color='Active'
                    ,hover_name='Active', title='Active cases in each Country ')
fig.update_layout(geo=dict(projection_type='natural earth'))
fig.update_layout(height=650)
fig.show()

fig = px.choropleth(df, locations='Country/Region',locationmode='country
names',color='Country/Region'
                    ,hover_name='New deaths', title='New deaths in each Country ')
fig.update_layout(geo=dict(projection_type='natural earth'))
fig.update_layout(height=650)
fig.show()

import plotly.express as px

```

```
fig = px.choropleth(df, locations='Country/Region',locationmode='country names',color='New cases'
```

```
,hover_name='New cases', title='New cases in each Country ')
```

```
fig.update_layout(geo=dict(projection_type='natural earth'))
```

```
fig.update_layout(height=650)
```

```
fig.show()
```

6. Visualization

▼ Importing data

```
[ ]:
```

```
[3]: import pandas as pd
      df = pd.read_csv('C:/Users/AMAN/Desktop/covid.csv')
      df
```

```
[3]:
```

	Country/ Region	Confirmed	Deaths	Recovered	Active	New cases	New deaths	New recovered	Deaths / 100 Cases	Recovered / 100 Cases	Deaths / 100 Recovered	Confirmed last week	1 week change	1 week % increase	WHO Region
0	Afghanistan	36263	1269	25198	9796	106.0	10.0	18.0	3.50	69.49	5.04	35526	737.0	2.07	Eastern Mediterranean
1	Albania	4880	144	2745	1991	117.0	6.0	63.0	2.95	56.25	5.25	4171	709.0	17.00	Europe
2	Algeria	27973	1163	18837	7973	616.0	8.0	749.0	4.16	67.34	6.17	23691	4282.0	18.07	Africa
3	Andorra	907	52	803	52	10.0	NaN	NaN	5.73	88.53	6.48	884	23.0	2.60	Europe
4	Angola	950	41	242	667	18.0	1.0	0.0	4.32	25.47	16.94	749	201.0	26.84	Africa
...
185	Zambia	4552	140	2815	1597	71.0	1.0	465.0	3.08	61.84	4.97	3326	1226.0	36.86	Africa
186	Zimbabwe	2704	36	542	2126	192.0	2.0	24.0	1.33	20.04	6.64	1713	991.0	57.85	Africa
187	Uzbekistan	21209	121	11674	9414	678.0	5.0	569.0	0.57	55.04	1.04	17149	4060.0	23.67	Europe
188	Mozambique	1701	11	0	1690	32.0	0.0	0.0	0.65	0.00	inf	1507	194.0	12.87	Africa
189	Namibia	1843	8	101	1734	68.0	0.0	26.0	0.43	5.48	7.92	1344	499.0	37.13	Africa

190 rows × 15 columns

shape, count and columns of data

```
[ ]:
```

```
[5]: df.columns
```

```
[5]: Index(['Country/Region', 'Confirmed', 'Deaths', 'Recovered', 'Active',
        'New cases', 'New deaths', 'New recovered', 'Deaths / 100 Cases',
        'Recovered / 100 Cases', 'Deaths / 100 Recovered',
        'Confirmed last week', '1 week change', '1 week % increase',
        'WHO Region'],
        dtype='object')
```

```
[6]: df.shape
```

```
[6]: (190, 15)
```

```
[7]: df.count()
```

```
[7]: Country/Region      190
      Confirmed        190
      Deaths          190
      Recovered        190
      Active           190
      New cases        188
      New deaths       181
      New recovered    187
      Deaths / 100 Cases 190
      Recovered / 100 Cases 190
      Deaths / 100 Recovered 190
      Confirmed last week 190
      1 week change     189
      1 week % increase  190
      WHO Region        190
      dtype: int64
```

▼ checking Null values

```
[ ]:
```

```
[22]: df.isnull()
```

```
[22]:
```

	Country/ Region	Confirmed	Deaths	Recovered	Active	New cases	New deaths	New recovered	Deaths / 100 Cases	Recovered / 100 Cases	Deaths / 100 Recovered	Confirmed last week	1 week change	1 week % increase	WHO Region	Active/ Deaths Ratio	Confirme Recover Rat
0	False	False	False	False	False	False	False	False	False	False	False	False	False	False	False	False	Fal
1	False	False	False	False	False	False	False	False	False	False	False	False	False	False	False	False	Fai
2	False	False	False	False	False	False	False	False	False	False	False	False	False	False	False	False	Fai
3	False	False	False	False	False	False	False	False	False	False	False	False	False	False	False	False	Fai
4	False	False	False	False	False	False	False	False	False	False	False	False	False	False	False	False	Fai
...
185	False	False	False	False	False	False	False	False	False	False	False	False	False	False	False	False	Fai
186	False	False	False	False	False	False	False	False	False	False	False	False	False	False	False	False	Fai
187	False	False	False	False	False	False	False	False	False	False	False	False	False	False	False	False	Fai
188	False	False	False	False	False	False	False	False	False	False	False	False	False	False	False	False	Fai
189	False	False	False	False	False	False	False	False	False	False	False	False	False	False	False	False	Fai

190 rows × 17 columns

```
[13]: 0      False
      1      False
      2      False
      3      False
      4      False
      ...
      185    False
      186    False
      187     True
      188     True
      189     True
      Length: 190, dtype: bool
```

```
0      False
1      False
2      False
3      False
4      False
...
182    False
183    False
184    False
185    False
186    False
      Length: 187, dtype: bool
```

[17]:

	Country/ Region	Confirmed	Deaths	Recovered	Active	New cases	New deaths	New recovered	Deaths / 100 Cases	Recovered / 100 Cases	Deaths / 100 Recovered	Confirmed last week	1 week change	1 week % increase	WHO Region
0	Afghanistan	36263	1269	25198	9796	106.0	10.0	18.0	3.50	69.49	5.04	35526	737.0	2.07	Eastern Mediterranean
1	Albania	4880	144	2745	1991	117.0	6.0	63.0	2.95	56.25	5.25	4171	709.0	17.00	Europe
2	Algeria	27973	1163	18837	7973	616.0	8.0	749.0	4.16	67.34	6.17	23691	4282.0	18.07	Africa
3	Andorra	907	52	803	52	10.0	1.0	24.0	5.73	88.53	6.48	884	23.0	2.60	Europe
4	Angola	950	41	242	667	18.0	1.0	0.0	4.32	25.47	16.94	749	201.0	26.84	Africa
...
185	Zambia	4552	140	2815	1597	71.0	1.0	465.0	3.08	61.84	4.97	3326	1226.0	36.86	Africa
186	Zimbabwe	2704	36	542	2126	192.0	2.0	24.0	1.33	20.04	6.64	1713	991.0	57.85	Africa
187	Uzbekistan	21209	121	11674	9414	678.0	5.0	569.0	0.57	55.04	1.04	17149	4060.0	23.67	Europe
188	Mozambique	1701	11	0	1690	32.0	0.0	0.0	0.65	0.00	inf	1507	194.0	12.87	Africa
189	Namibia	1843	8	101	1734	68.0	0.0	26.0	0.43	5.48	7.92	1344	499.0	37.13	Africa

190 rows × 15 columns

Insights from Data

[]:

information and description of data

[17]: `df.describe()`

	Confirmed	Deaths	Recovered	Active	New cases	New deaths	New recovered	Deaths / 100 Cases	Recovered / 100 Cases	Deaths / 100 Recovered	Confirmed last week	1 wee chang
count	1.870000e+02	187.000000	1.870000e+02	1.870000e+02	187.000000	187.000000	187.000000	187.000000	187.000000	187.00	1.870000e+02	186.00000
mean	8.813094e+04	3497.518717	5.063148e+04	3.400194e+04	1223.550802	29.005348	934.197861	3.019519	64.820535	inf	7.868248e+04	9499.25806
std	3.833187e+05	14100.002482	1.901882e+05	2.133262e+05	5710.249850	120.025692	4197.634610	3.454302	26.287694	NaN	3.382737e+05	47614.21474
min	1.000000e+01	0.000000	0.000000e+00	0.000000e+00	0.000000	0.000000	0.000000	0.000000	0.000000	0.00	1.000000e+01	-47.00000
25%	1.114000e+03	18.500000	6.265000e+02	1.415000e+02	5.000000	0.000000	0.000000	0.945000	48.770000	1.45	1.051500e+03	51.25000
50%	5.059000e+03	108.000000	2.815000e+03	1.600000e+03	55.500000	1.000000	24.000000	2.150000	71.320000	3.62	5.020000e+03	448.50000
75%	4.046050e+04	734.000000	2.260600e+04	9.149000e+03	419.500000	6.000000	221.000000	3.875000	86.885000	6.44	3.708050e+04	3248.50000
max	4.290259e+06	148011.000000	1.846641e+06	2.816444e+06	56336.000000	1076.000000	33728.000000	28.560000	100.000000	inf	3.834677e+06	455582.00000

```
<class 'pandas.core.frame.DataFrame'>
Index: 187 entries, 0 to 186
Data columns (total 15 columns):
 #   Column                                Non-Null Count  Dtype
---  -
 0   Country/Region                       187 non-null    object
 1   Confirmed                           187 non-null    int64
 2   Deaths                             187 non-null    int64
 3   Recovered                           187 non-null    int64
 4   Active                              187 non-null    int64
 5   New cases                           187 non-null    float64
 6   New deaths                          187 non-null    float64
 7   New recovered                       187 non-null    float64
 8   Deaths / 100 Cases                 187 non-null    float64
 9   Recovered / 100 Cases               187 non-null    float64
10   Deaths / 100 Recovered             187 non-null    float64
11   Confirmed last week                 187 non-null    int64
12   1 week change                       186 non-null    float64
13   1 week % increase                   187 non-null    float64
14   WHO Region                          187 non-null    object
dtypes: float64(8), int64(5), object(2)
memory usage: 23.4+ KB
```



```

Country/Region      AfghanistanAlbaniaAlgeriaAndorraAngolaAntigua ...
Confirmed            16505238
Deaths               654176
Recovered            9479862
Active               6371200
New cases            229471.0
New deaths           5420.0
New recovered        175218.0
Deaths / 100 Cases   566.3
Recovered / 100 Cases 12181.96
Deaths / 100 Recovered inf
Confirmed last week  14733623
1 week change        1771615.0
1 week % increase    2618.03
WHO Region           Eastern MediterraneanEuropeAfricaEuropeAfricaA...
dtype: object

```

[40]:

	Country/ Region	Confirmed	Deaths	Recovered	Active	New cases	New deaths	New recovered	Deaths / 100 Cases	Recovered / 100 Cases	Deaths / 100 Recovered	Confirmed last week	1 week change	1 week % increase	WHO Region	Confirmed Recovered Ratio
0	Afghanistan	36263	1269	25198	9796	106.0	10.0	18.0	3.50	69.49	5.04	35526	737.0	2.07	Eastern Mediterranean	1.439
1	Albania	4880	144	2745	1991	117.0	6.0	63.0	2.95	56.25	5.25	4171	709.0	17.00	Europe	1.777
2	Algeria	27973	1163	18837	7973	616.0	8.0	749.0	4.16	67.34	6.17	23691	4282.0	18.07	Africa	1.485
3	Andorra	907	52	803	52	10.0	NaN	NaN	5.73	88.53	6.48	884	23.0	2.60	Europe	1.129
4	Angola	950	41	242	667	18.0	1.0	0.0	4.32	25.47	16.94	749	201.0	26.84	Africa	3.925
...
185	Zambia	4552	140	2815	1597	71.0	1.0	465.0	3.08	61.84	4.97	3326	1226.0	36.86	Africa	1.617
186	Zimbabwe	2704	36	542	2126	192.0	2.0	24.0	1.33	20.04	6.64	1713	991.0	57.85	Africa	4.988
187	Uzbekistan	21209	121	11674	9414	678.0	5.0	569.0	0.57	55.04	1.04	17149	4060.0	23.67	Europe	1.816
188	Mozambique	1701	11	0	1690	32.0	0.0	0.0	0.65	0.00	inf	1507	194.0	12.87	Africa	
189	Namibia	1843	8	101	1734	68.0	0.0	26.0	0.43	5.48	7.92	1344	499.0	37.13	Africa	18.247

190 rows × 17 columns

[39]:

	Country/ Region	Confirmed	Deaths	Recovered	Active	New cases	New deaths	New recovered	Deaths / 100 Cases	Recovered / 100 Cases	Deaths / 100 Recovered	Confirmed last week	1 week change	1 week % increase	WHO Region	Confirmed Recovered Ratio
0	Afghanistan	36263	1269	25198	9796	106.0	10.0	18.0	3.50	69.49	5.04	35526	737.0	2.07	Eastern Mediterranean	1.439
1	Albania	4880	144	2745	1991	117.0	6.0	63.0	2.95	56.25	5.25	4171	709.0	17.00	Europe	1.777
2	Algeria	27973	1163	18837	7973	616.0	8.0	749.0	4.16	67.34	6.17	23691	4282.0	18.07	Africa	1.485
3	Andorra	907	52	803	52	10.0	NaN	NaN	5.73	88.53	6.48	884	23.0	2.60	Europe	1.129
4	Angola	950	41	242	667	18.0	1.0	0.0	4.32	25.47	16.94	749	201.0	26.84	Africa	3.925
...
185	Zambia	4552	140	2815	1597	71.0	1.0	465.0	3.08	61.84	4.97	3326	1226.0	36.86	Africa	1.617
186	Zimbabwe	2704	36	542	2126	192.0	2.0	24.0	1.33	20.04	6.64	1713	991.0	57.85	Africa	4.988
187	Uzbekistan	21209	121	11674	9414	678.0	5.0	569.0	0.57	55.04	1.04	17149	4060.0	23.67	Europe	1.816
188	Mozambique	1701	11	0	1690	32.0	0.0	0.0	0.65	0.00	inf	1507	194.0	12.87	Africa	
189	Namibia	1843	8	101	1734	68.0	0.0	26.0	0.43	5.48	7.92	1344	499.0	37.13	Africa	18.247

190 rows × 17 columns

Top & bottom 10 country according to their cofirmed,death,recoverd cases

```
[ ]:
[10]: T1 = df.sort_values(by=['Confirmed'], ascending=False).head(10)
T1
```

[10]:

	Country/ Region	Confirmed	Deaths	Recovered	Active	New cases	New deaths	New recovered	Deaths / 100 Cases	Recovered / 100 Cases	Deaths / 100 Recovered	Confirmed last week	1 week change	1 week % increase	WHO Region	Acti Dea Ra
173	US	4290259	148011	1325804	2816444	56336.0	1076.0	27941.0	3.45	30.90	11.16	3834677	455582.0	11.88	Americas	19.028
23	Brazil	2442375	87618	1846641	508116	23284.0	614.0	33728.0	3.59	75.61	4.74	2118646	323729.0	15.28	Americas	5.799
79	India	1480073	33408	951166	495499	44457.0	637.0	33598.0	2.26	64.26	3.51	1155338	324735.0	28.11	South-East Asia	14.831
138	Russia	816680	13334	602249	201097	5607.0	85.0	3077.0	1.63	73.74	2.21	776212	40468.0	5.21	Europe	15.081
154	South Africa	452529	7067	274925	170537	7096.0	298.0	9848.0	1.56	60.75	2.57	373628	78901.0	21.12	Africa	24.131
111	Mexico	395489	44022	303810	47657	4973.0	342.0	8588.0	11.13	76.82	14.49	349396	46093.0	13.19	Americas	1.082
132	Peru	389717	18418	272547	98752	13756.0	575.0	4697.0	4.73	69.93	6.76	357681	32036.0	8.96	Americas	5.361
35	Chile	347923	9187	319954	18782	2133.0	75.0	1859.0	2.64	91.96	2.87	333029	14894.0	4.47	Americas	2.044
177	United Kingdom	301708	45844	1437	254427	688.0	7.0	3.0	15.19	0.48	3190.26	296944	4764.0	1.60	Europe	5.549
81	Iran	293606	15912	255144	22550	2434.0	212.0	1931.0	5.42	86.90	6.24	276202	17404.0	6.30	Eastern Mediterranean	1.417

	Country/ Region	Confirmed	Deaths	Recovered	Active	New cases	New deaths	New recovered	Deaths / 100 Cases	Recovered / 100 Cases	Deaths / 100 Recovered	Confirmed last week	1 week change	1 week % increase	WHO Region	Active/ Deaths Ratio	Contirn Recov F
183	Western Sahara	10	1	8	1	0.0	0.0	0.0	10.0	80.00	12.5	10	0.0	0.00	Africa	1.0	1.25
75	Holy See	12	0	12	0	0.0	0.0	0.0	0.0	100.00	0.0	12	0.0	0.00	Europe	NaN	1.00
68	Greenland	14	0	13	1	1.0	0.0	0.0	0.0	92.86	0.0	13	1.0	7.69	Europe	inf	1.07
140	Saint Kitts and Nevis	17	0	15	2	0.0	0.0	0.0	0.0	88.24	0.0	17	0.0	0.00	Americas	inf	1.13
49	Dominica	18	0	18	0	0.0	0.0	0.0	0.0	100.00	0.0	18	0.0	0.00	Americas	NaN	1.00
94	Laos	20	0	19	1	0.0	0.0	0.0	0.0	95.00	0.0	19	1.0	5.26	Western Pacific	inf	1.05
69	Grenada	23	0	23	0	0.0	0.0	0.0	0.0	100.00	0.0	23	0.0	0.00	Americas	NaN	1.00
141	Saint Lucia	24	0	22	2	NaN	0.0	0.0	0.0	91.67	0.0	23	1.0	4.35	Americas	inf	1.09
168	Timor- Leste	24	0	0	24	0.0	0.0	0.0	0.0	0.00	0.0	24	0.0	0.00	South- East Asia	inf	
59	Fiji	27	0	18	9	0.0	NaN	0.0	0.0	66.67	0.0	27	0.0	0.00	Western Pacific	inf	1.50

	Country/ Region	Confirmed	Deaths	Recovered	Active	New cases	New deaths	New recovered	Deaths / 100 Cases	Recovered / 100 Cases	Deaths / 100 Recovered	Confirmed last week	1 week change	1 week % increase	WHO Region	Actr Dea Ra
173	US	4290259	148011	1325804	2816444	56336.0	1076.0	27941.0	3.45	30.90	11.16	3834677	455582.0	11.88	Americas	19.028
23	Brazil	2442375	87618	1846641	508116	23284.0	614.0	33728.0	3.59	75.61	4.74	2118646	323729.0	15.28	Americas	5.799
177	United Kingdom	301708	45844	1437	254427	688.0	7.0	3.0	15.19	0.48	3190.26	296944	4764.0	1.60	Europe	5.549
111	Mexico	395489	44022	303810	47657	4973.0	342.0	8588.0	11.13	76.82	14.49	349396	46093.0	13.19	Americas	1.082
85	Italy	246286	35112	198593	12581	168.0	5.0	147.0	14.26	80.64	17.68	244624	1662.0	0.68	Europe	0.358
79	India	1480073	33408	951166	495499	44457.0	637.0	33598.0	2.26	64.26	3.51	1155338	324735.0	28.11	South-East Asia	14.831
61	France	220352	30212	81212	108928	2551.0	17.0	267.0	13.71	36.86	37.20	214023	6329.0	2.96	Europe	3.605
157	Spain	272421	28432	150376	93613	0.0	0.0	0.0	10.44	55.20	18.91	264836	7585.0	2.86	Europe	3.292
132	Peru	389717	18418	272547	98752	13756.0	575.0	4697.0	4.73	69.93	6.76	357681	32036.0	8.96	Americas	5.361
81	Iran	293606	15912	255144	22550	2434.0	212.0	1931.0	5.42	86.90	6.24	276202	17404.0	6.30	Eastern Mediterranean	1.417

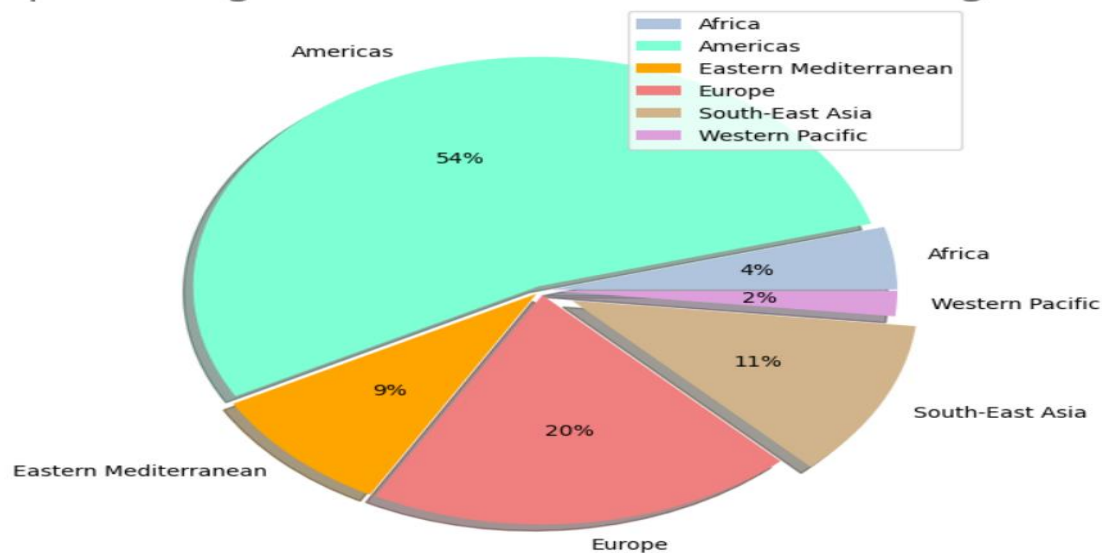
	Country/ Region	Confirmed	Deaths	Recovered	Active	New cases	New deaths	New recovered	Deaths / 100 Cases	Recovered / 100 Cases	Deaths / 100 Recovered	Confirmed last week	1 week change	1 week % increase	WHO Region	Active/ Deaths Ratio	Confirm Recov F
94	Laos	20	0	19	1	0.0	0.0	0.0	0.0	95.00	0.0	19	1.0	5.26	Western Pacific	inf	1.05
55	Eritrea	265	0	191	74	2.0	0.0	2.0	0.0	72.08	0.0	251	14.0	5.58	Africa	inf	1.38
30	Cambodia	226	0	147	79	1.0	0.0	4.0	0.0	65.04	0.0	171	55.0	32.16	Western Pacific	inf	1.53
59	Fiji	27	0	18	9	0.0	NaN	0.0	0.0	66.67	0.0	27	0.0	0.00	Western Pacific	inf	1.50
68	Greenland	14	0	13	1	1.0	0.0	0.0	0.0	92.86	0.0	13	1.0	7.69	Europe	inf	1.07
69	Grenada	23	0	23	0	0.0	0.0	0.0	0.0	100.00	0.0	23	0.0	0.00	Americas	NaN	1.00
75	Holy See	12	0	12	0	0.0	0.0	0.0	0.0	100.00	0.0	12	0.0	0.00	Europe	NaN	1.00
19	Bhutan	99	0	86	13	4.0	0.0	1.0	0.0	86.87	0.0	90	9.0	10.00	South- East Asia	inf	1.15
49	Dominica	18	0	18	0	0.0	0.0	0.0	0.0	100.00	0.0	18	0.0	0.00	Americas	NaN	1.00
130	Papua New Guinea	62	0	11	51	0.0	0.0	0.0	0.0	17.74	0.0	19	43.0	226.32	Western Pacific	inf	5.63

	Country/ Region	Confirmed	Deaths	Recovered	Active	New cases	New deaths	New recovered	Deaths / 100 Cases	Recovered / 100 Cases	Deaths / 100 Recovered	Confirmed last week	1 week change	1 week % increase	WHO Region
23	Brazil	2442375	87618	1846641	508116	23284.0	614.0	33728.0	3.59	75.61	4.74	2118646	323729.0	15.28	Americas
173	US	4290259	148011	1325804	2816444	56336.0	1076.0	27941.0	3.45	30.90	11.16	3834677	455582.0	11.88	Americas
79	India	1480073	33408	951166	495499	44457.0	637.0	33598.0	2.26	64.26	3.51	1155338	324735.0	28.11	South-East Asia
138	Russia	816680	13334	602249	201097	5607.0	85.0	3077.0	1.63	73.74	2.21	776212	40468.0	5.21	Europe
35	Chile	347923	9187	319954	18782	2133.0	75.0	1859.0	2.64	91.96	2.87	333029	14894.0	4.47	Americas
111	Mexico	395489	44022	303810	47657	4973.0	342.0	8588.0	11.13	76.82	14.49	349396	46093.0	13.19	Americas
154	South Africa	452529	7067	274925	170537	7096.0	298.0	9848.0	1.56	60.75	2.57	373628	78901.0	21.12	Africa
132	Peru	389717	18418	272547	98752	13756.0	575.0	4697.0	4.73	69.93	6.76	357681	32036.0	8.96	Americas
81	Iran	293606	15912	255144	22550	2434.0	212.0	1931.0	5.42	86.90	6.24	276202	17404.0	6.30	Eastern Mediterranean
128	Pakistan	274289	5842	241026	27421	1176.0	20.0	3592.0	2.13	87.87	2.42	266096	8193.0	3.08	Eastern Mediterranean

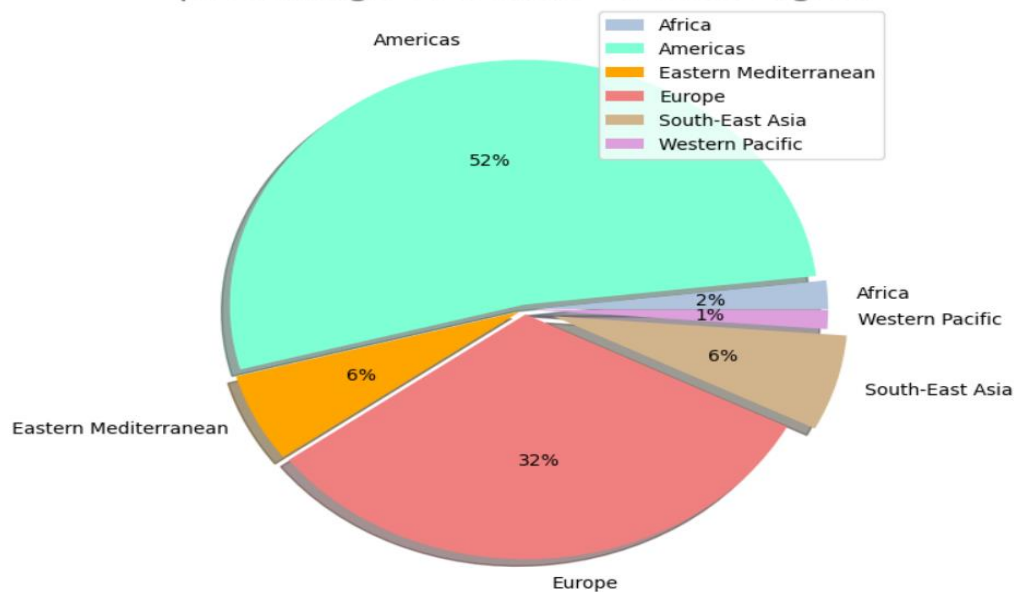
	Country/ Region	Confirmed	Deaths	Recovered	Active	New cases	New deaths	New recovered	Deaths / 100 Cases	Recovered / 100 Cases	Deaths / 100 Recovered	Confirmed last week	1 week change	1 week % increase	WHO Region
32	Canada	116458	8944	0	107514	682.0	11.0	0.0	7.68	0.00	inf	112925	3533.0	3.13	Americas
168	Timor-Leste	24	0	0	24	0.0	0.0	0.0	0.00	0.00	0.0	24	0.0	0.00	South-East Asia
163	Syria	674	40	0	634	24.0	2.0	0.0	5.93	0.00	inf	522	152.0	29.12	Eastern Mediterranean
161	Sweden	79395	5700	0	73695	398.0	3.0	0.0	7.18	0.00	inf	78048	1347.0	1.73	Europe
147	Serbia	24141	543	0	23598	411.0	9.0	0.0	2.25	0.00	inf	21253	2888.0	13.59	Europe
188	Mozambique	1701	11	0	1690	32.0	0.0	0.0	0.65	0.00	inf	1507	194.0	12.87	Africa
117	Mozambique	1701	11	0	1690	32.0	0.0	0.0	0.65	0.00	inf	1507	194.0	12.87	Africa
183	Western Sahara	10	1	8	1	0.0	0.0	0.0	10.00	80.00	12.5	10	0.0	0.00	Africa
130	Papua New Guinea	62	0	11	51	0.0	0.0	0.0	0.00	17.74	0.0	19	43.0	226.32	Western Pacific
75	Holy See	12	0	12	0	0.0	0.0	0.0	0.00	100.00	0.0	12	0.0	0.00	Europe

WHO Region	Confirmed	Deaths	Recovered
Africa	726751	12242	440746
Americas	8839286	342732	4468616
Eastern Mediterranean	1490744	38339	1201400
Europe	3320732	211265	2005397
South-East Asia	1835297	41349	1156933
Western Pacific	292428	8249	206770

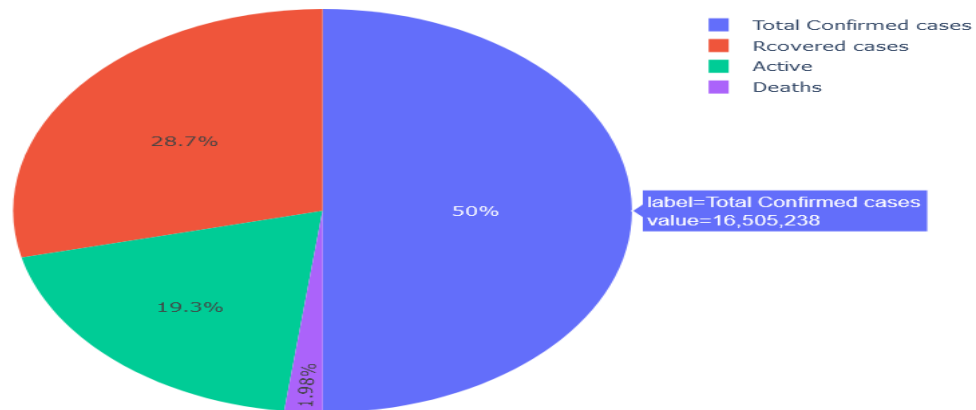
percentage of Confirmed cases in each region



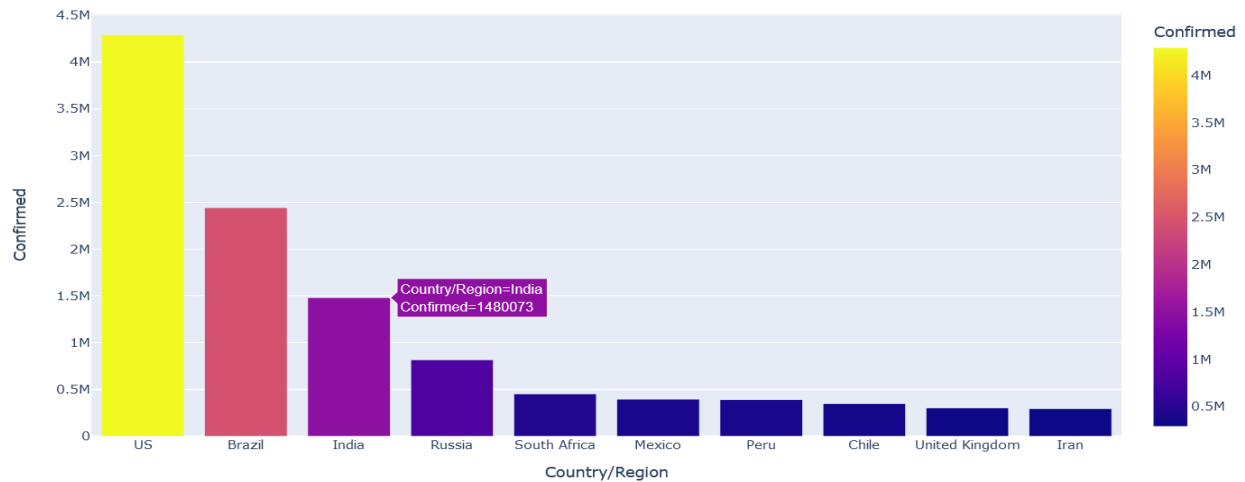
percentage of Deaths in each region



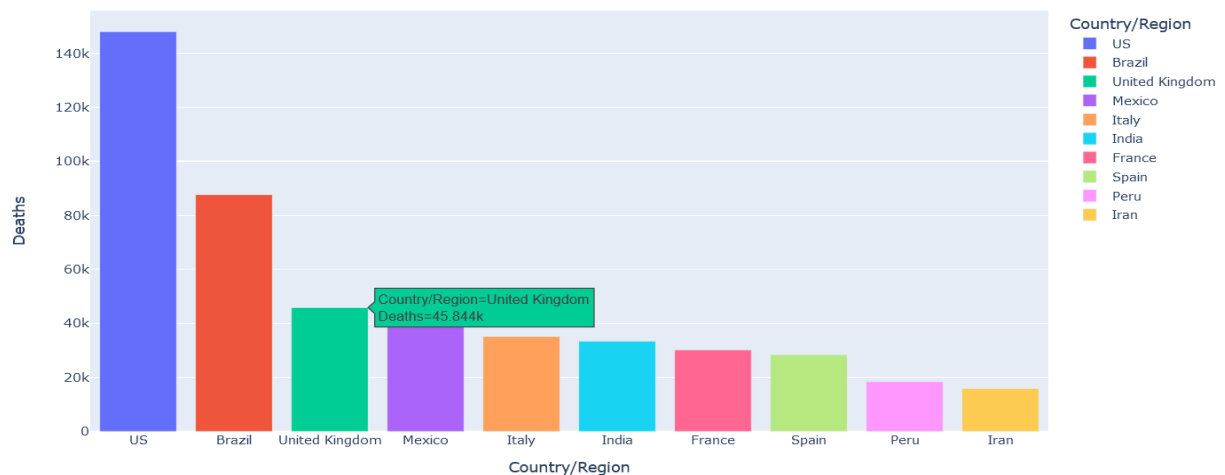
Covid cases Distribution



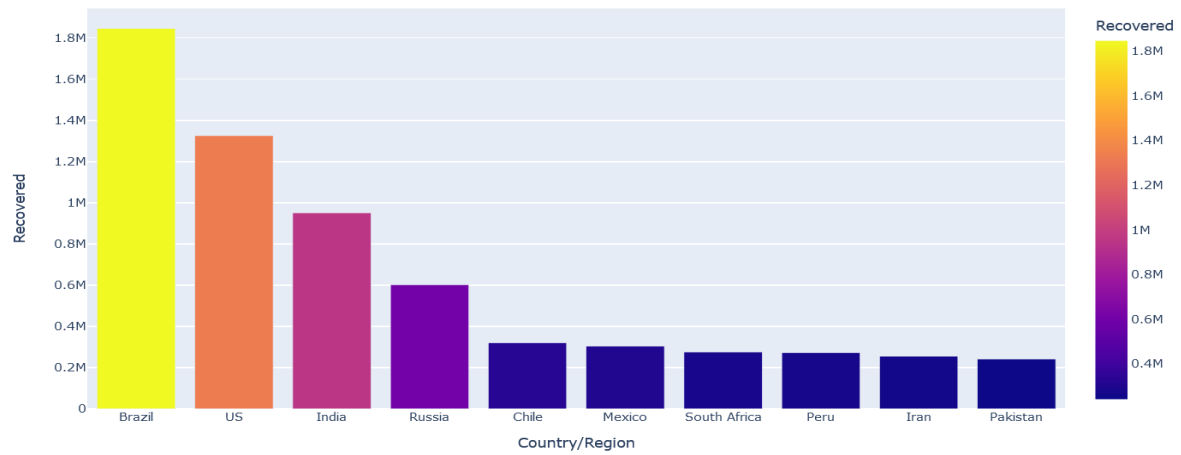
Top 10 country in the world with Confirmed cases



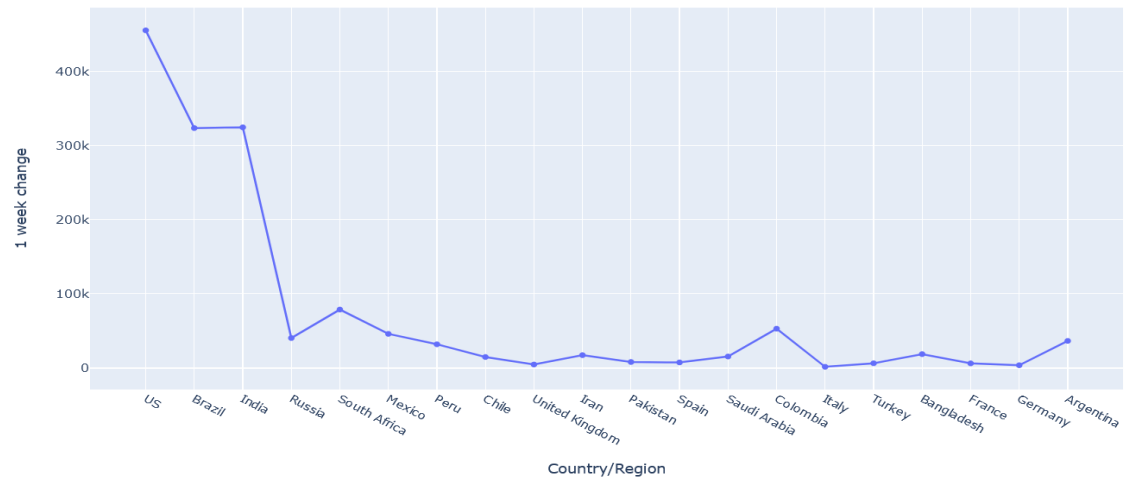
Top 10 country in the world with Deaths cases



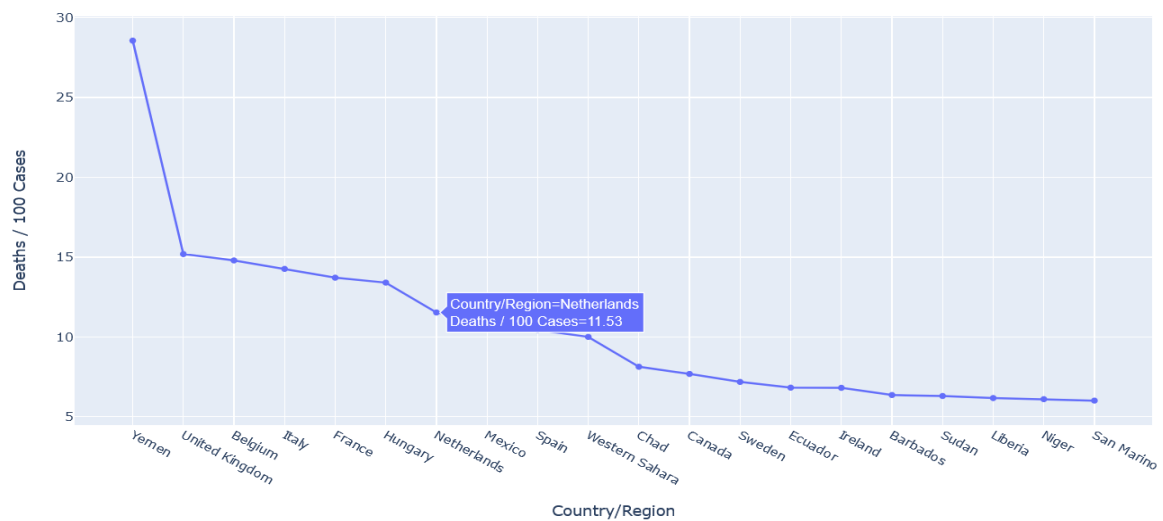
Top 10 country in the world with Rcovered cases



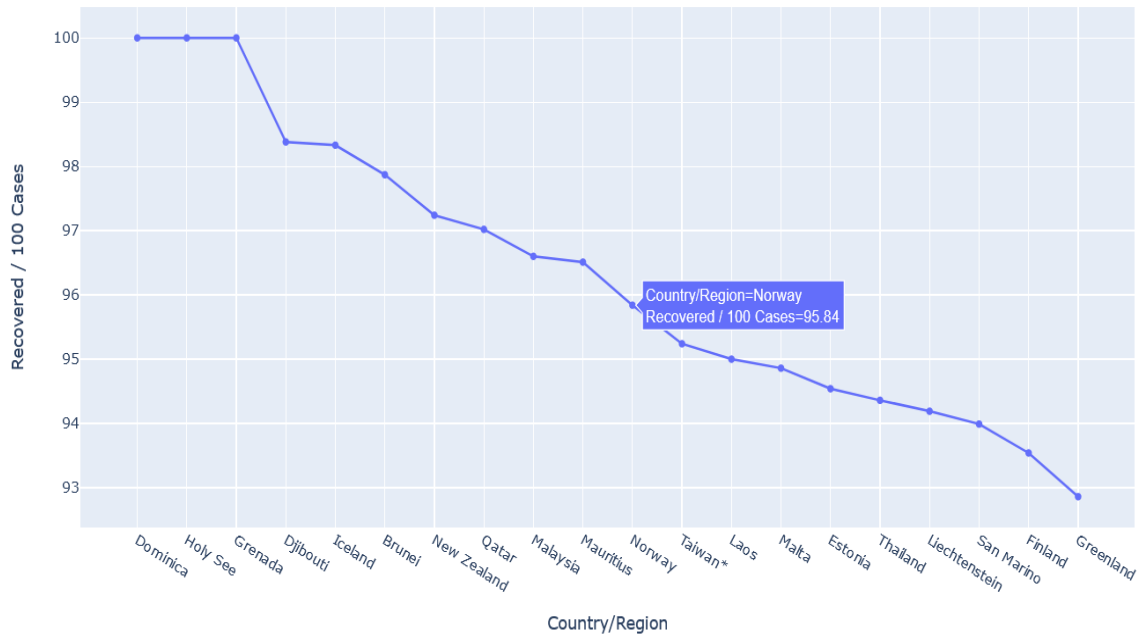
Last one week change in Top 20 Country



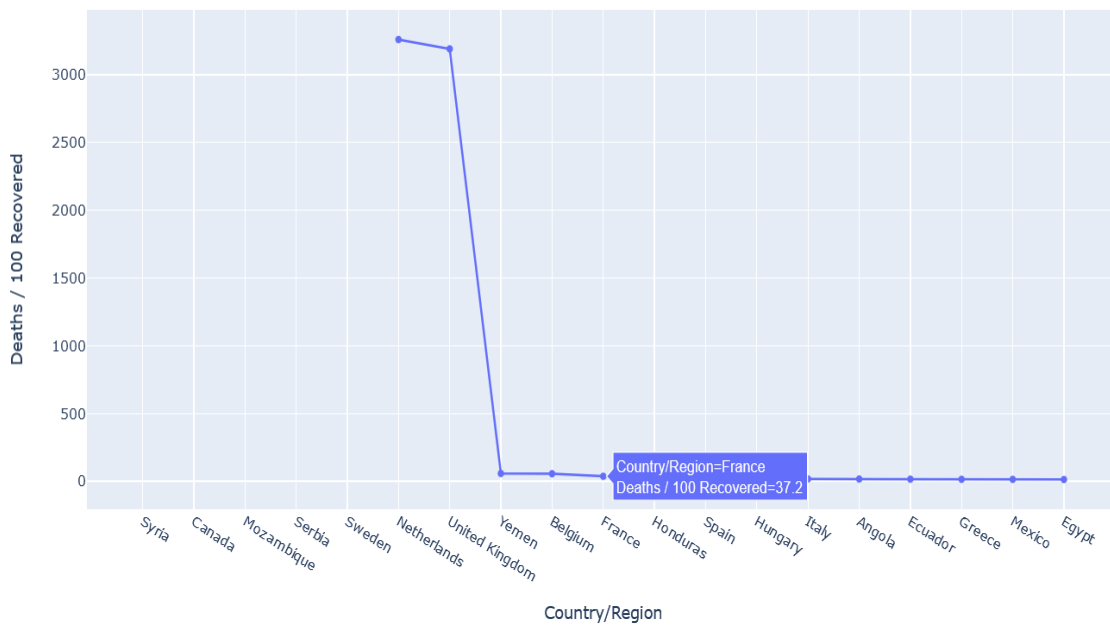
Deaths / 100 Cases of Top 20 Country



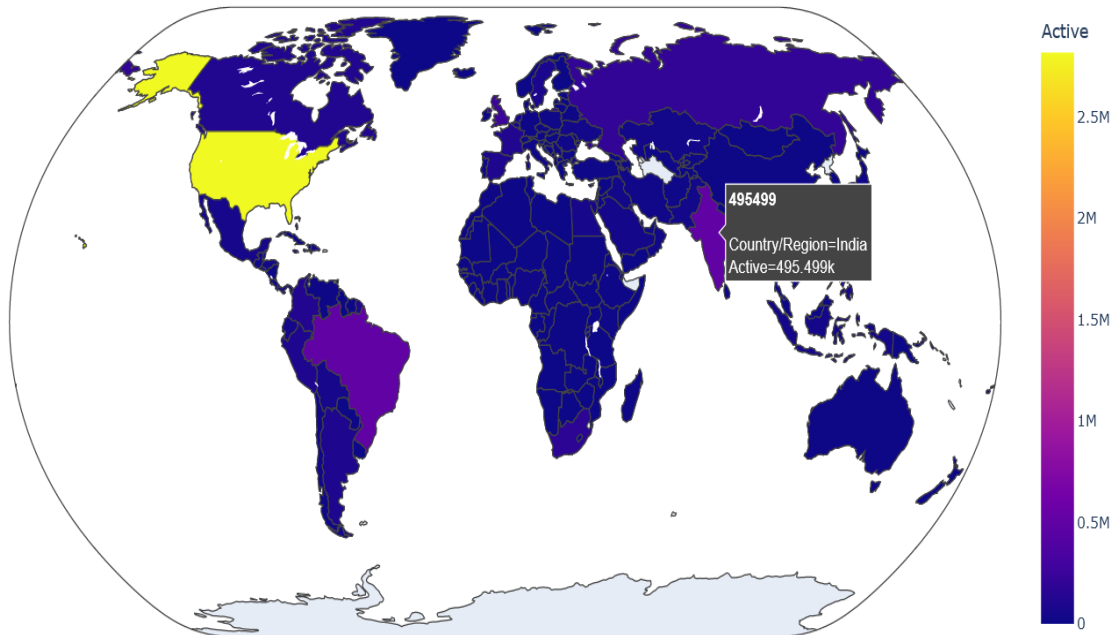
Recovered / 100 Cases of Top 20 Country



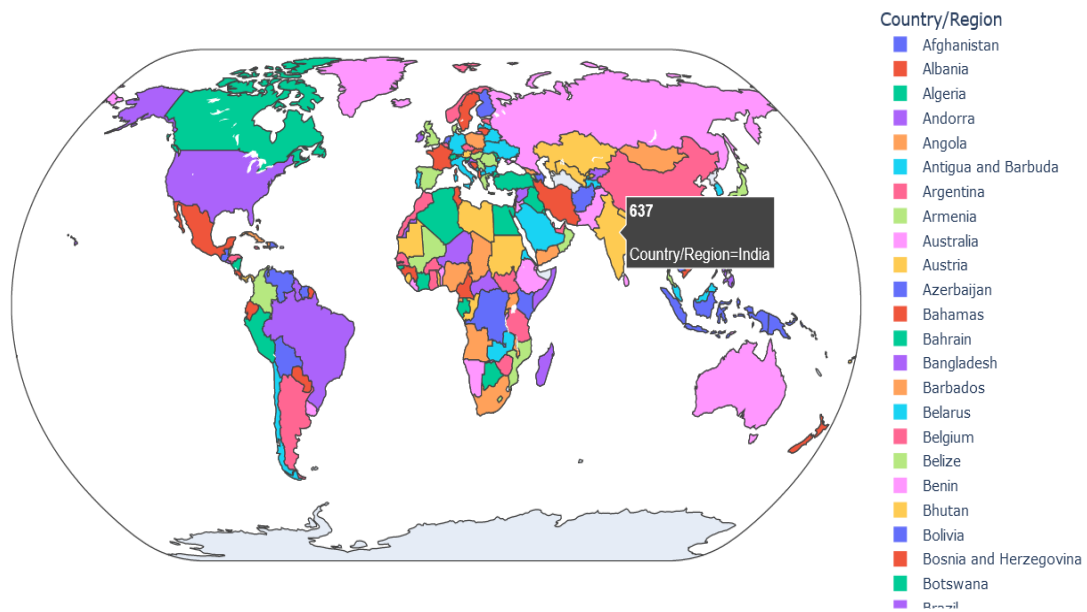
Deaths / 100 Recovered of Top 20 Country



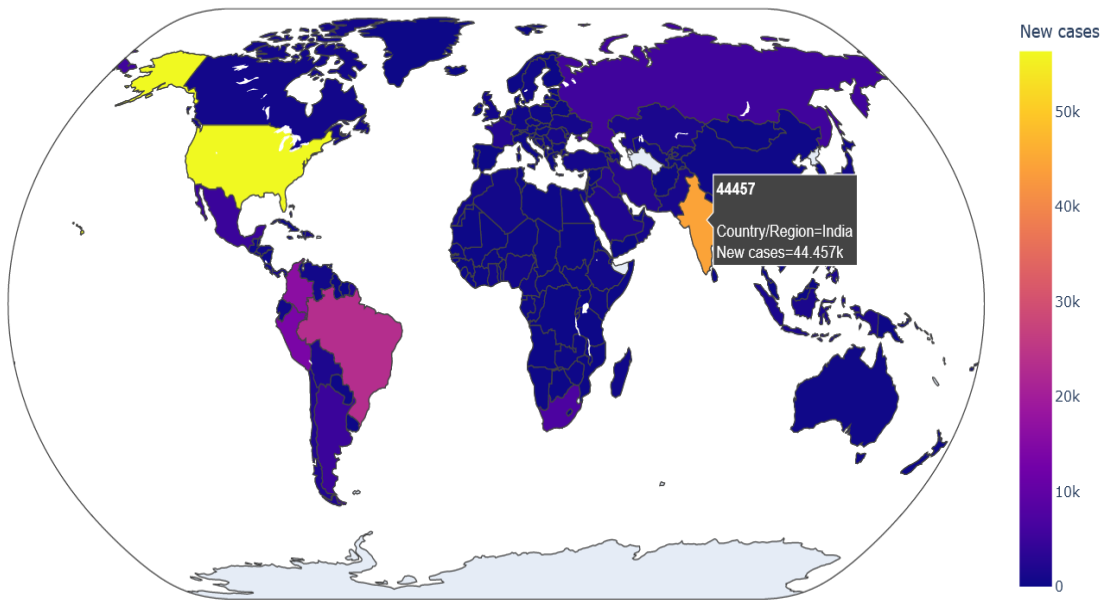
Active cases in each Country



New deaths in each Country



New cases in each Country



Covid Dashboard

File Home Transform Add Column View Tools Help

Close & Apply New Source Recent Sources Enter Data Data source settings Manage Parameters Refresh Advanced Editor Choose Remove Keep Remove Split Group Data Type: Text Merge Queries Text Analytics Append Queries Vision Combine Files Azure Machine Learning AI Insights

Queries [1] covid

fx = Csv.Document(File.Contents("C:\Users\AMAN\Desktop\covid.csv"),[Delimiter=";", Columns=15, Encoding=1252, QuoteStyle=QuoteStyle.None])

Column1 Column2 Column3 Column4 Column5 Column6 Column7

Country/Region	Recovered	Active	New cases	New deaths
1 Afghanistan	25198	9796	106	10
2 Albania	2745	1991	117	6
3 Algeria	18837	7973	616	8
4 Andorra	803	52	10	
5 Angola	242	667	18	1
6 Antigua and Barbuda	65	18	4	0
7 Argentina	72575	91782	4890	120
8 Armenia	26665	10014	73	6
9 Australia	9311	5825	368	6
10 Austria	18246	1599	86	1
11 Azerbaijan	23242	6781	396	6
12 Bahamas	91	280	40	0
13 Bahrain	36110	3231	351	1
14 Bangladesh	125683	97577	2772	37
15 Barbados	94	9	0	
16 Belarus	60492	6221	119	4
17 Belgium	17452	39154	402	1
18 Belize	26	20	0	0
19 Benin	1036	699	0	0
20 Bhutan	86	13	4	0
21 Bolivia	21478	47056	1752	64
22 Bosnia and Herzegovina	10498	4930	5274	731
23 Botswana	739	63	674	53
24 Brazil	2442375	87618	1846641	508116
25 Brunei	141	3	138	0
26 Bulgaria	10621	347	5585	4689
27			194	7
28				

15 COLUMNS, 191 ROWS Column profiling based on top 1000 rows

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ENG US 16:51 12-04-2024

Covid Dashboard

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Query Settings Layout Data Preview Columns Parameters Advanced Query Dependencies

Queries [1] covid

Formula Bar: = Table.Distinct(Source, {"Column1"})

	Column6	Column7	Column8	Column9	Column10	Column11
1	100% Valid 0% Error 0% Empty	99% Valid 0% Error 1% Empty	95% Valid 0% Error 5% Empty	98% Valid 0% Error 2% Empty	100% Valid 0% Error 0% Empty	100% Valid 0% Error 0% Empty
2	New cases	New deaths	New recovered	Deaths / 100 Cases	Recovered / 100 Cases	Deaths / 100 Recovered
3	106	10	18	3.5	69.49	5.04
4	117	6	63	2.95	56.25	5.25
5	616	8	749	4.16	67.34	6.17
6	10			5.73	88.53	6.48
7	18	1	0	4.32	25.47	16.94
8	4	0	5	3.49	75.58	4.62
9	4890	120	2057	1.83	43.35	4.21
10	73	6	187	1.9	71.32	2.67
11	368	6	137	1.09	60.84	1.79
12	86	1	37	3.47	88.75	3.91
13	396	6	558	1.39	76.34	1.82
14	40	0	0	2.88	23.82	12.09
15	351	1	421	0.36	91.46	0.39
16	2772	37	1801	1.31	55.56	2.36
17	0		0	6.36	85.45	7.45
18	119	4	67	0.8	89.95	0.89
19	402	1	14	14.79	26.27	56.28
20	0	0	0	4.17	54.17	7.69
21	0	0	0	1.98	58.53	3.38
22	4	0	1	0	86.87	0
23	1752	64	309	3.72	30.17	12.32
24	731	14	375	2.8	46.96	5.96
25	53	1	11	0.27	8.53	3.17

15 COLUMNS, 188 ROWS Column profiling based on top 1000 rows

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Query Settings

PROPERTIES Name covid

APPLIED STEPS Source Removed Duplicates

Covid Dashboard

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Query Settings Layout Data Preview Columns Parameters Advanced Query Dependencies

Queries [1] covid

Formula Bar: = Table.ReplaceValue("#Removed Duplicates","", "0", Replacer.ReplaceValue,{"Column6"})

	Column5	Column6	Column7	Column8	Column9	Column10	Column11
1	Active	New cases					
2	3796	106					
3	1991	117					
4	7973	616					
5	52	10					
6	867	18					
7	18	4					
8	91782	4890					
9	10014	73					
10	5825	368					
11	1599	86					
12	5781	396					
13	280	40					
14	9231	351					
15	97577	2772	37	1801	1.31	55.56	2.36
16	9	0	0	6.36	85.45	7.45	
17	6221	119	4	67	0.8	89.95	0.89
18	39154	402	1	14	14.79	26.27	56.28
19	20	0	0	0	4.17	54.17	7.69
20	699	0	0	0	1.98	58.53	3.38
21	13	4	0	1	0	86.87	0
22	47056	1752	64	309	3.72	30.17	12.32
23	5274	731	14	375	2.8	46.96	5.96
24	674	53	1	11	0.27	8.53	3.17
25							

15 COLUMNS, 188 ROWS Column profiling based on top 1000 rows

PREVIEW DOWNLOADED AT 16:54

Query Settings

PROPERTIES Name covid

APPLIED STEPS Source Removed Duplicates Replaced Value1

Replace Values

Replace one value with another in the selected columns.

Value To Find

Replace With

Advanced options

OK Cancel

Covid Dashboard

File Home Transform Add Column View Tools Help

Query Settings Layout Data Preview Columns Parameters Advanced Editor Query Dependencies

Queries [1] covid

Formula Bar: `= Table.ReplaceValue("#Replaced Value2","",0,Replacer.ReplaceValue,{"Column13"})`

Column Headers: Column6, Column7, Column8, Column9, Column10, Column11

Column Profiles: Valid (100%), Error (0%), Empty (0%)

	Column6	Column7	Column8	Column9	Column10	Column11
1	New cases	New deaths	New recovered	Deaths / 100 Cases	Recovered / 100 Cases	Deaths / 100 Recovered
2	106	10	18	3.5	69.49	5.04
3	117	6	63	2.95	56.25	5.25
4	616	8	749	4.16	67.34	6.17
5	10	0	0	5.73	88.53	6.48
6	18	1	0	4.32	25.47	16.94
7	4	0	5	3.49	75.58	4.62
8	4890	120	2057	1.83	43.35	4.21
9	73	6	187	1.9	71.32	2.67
10	368	6	137	1.09	60.84	1.79
11	86	1	37	3.47	88.75	3.91
12	396	6	558	1.39	76.34	1.82
13	40	0	0	2.88	23.82	12.09
14	351	1	421	0.36	91.46	0.39
15	2772	37	1801	1.31	55.56	2.36
16	0	0	0	6.36	85.45	7.45
17	119	4	67	0.8	89.95	0.89
18	402	1	14	14.79	26.27	56.28
19	0	0	0	4.17	54.17	7.69
20	0	0	0	1.98	58.53	3.38
21	4	0	1	0	86.87	0
22	1752	64	309	3.72	30.17	12.32
23	731	14	375	2.8	46.96	5.96
24	53	1	11	0.27	8.53	3.17
25

15 COLUMNS, 188 ROWS Column profiling based on top 1000 rows

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Covid Dashboard

File Home Transform Add Column View Tools Help

Query Settings Layout Data Preview Columns Parameters Advanced Editor Query Dependencies

Queries [1] covid

Formula Bar: `= Table.RenameColumns("#Removed Columns",{"Column15", "WHO Region"})`

Column Headers: country, Confirmed, Deaths, Recovered, Active, New cases, New deaths

Column Profiles: Valid (100%), Error (0%), Empty (0%)

	country	Confirmed	Deaths	Recovered	Active	New cases	New deaths
1	Country/Region	Confirmed	Deaths	Recovered	Active	New cases	New deaths
2	Afghanistan	36263	1269	25198	9796	106	10
3	Albania	4880	144	2745	1991	117	6
4	Algeria	27973	1163	18837	7973	616	8
5	Andorra	907	52	803	52	10	0
6	Angola	950	41	242	667	18	1
7

14 COLUMNS, 188 ROWS Column profiling based on top 1000 rows

PREVIEW DOWNLOADED AT 16:55

Column statistics

Count	188
Error	0
Empty	0
Distinct	188
Unique	188
Empty string	0
Min	Afghanis...
Max	Zimbabwe

Value distribution

Albania	4880
Andorra	907
Angola	950
Antigua and Barbuda	...
Armenia	...
Australia	...
Austria	...
Azerbaijan	...
Bahamas	...
Bahrain	...
Bangladesh	...

Covid Dashboard

File Home Transform Add Column View Tools Help

Close & Apply New Source Recent Sources Enter Data Data source settings Manage Parameters Refresh Preview Advanced Editor Query Choose Columns Remove Columns Keep Rows Remove Rows Sort Split Column Group By Data Type: Text Use First Row as Headers Replace Values Merge Queries Append Queries Combine Files Text Analytics Vision Azure Machine Learning All Insights

Queries [1] covid

country Confirmed Deaths Recovered Active New cases New deaths

1 Country/Region Confirmed Deaths Recovered Active New cases New deaths

2 Afghanistan 36263 1269 25198 9796 106 10

3 Albania 4880 1163 18837 7973 616 8

4 Algeria 27973 52 803 52 10 0

5 Andorra 907 41 242 667 18 1

6 Angola 950 3 65 18 4 0

7 Antigua and Barbuda 86 3059 72575 91782 4890 120

8 Argentina 167416 711 26665 10014 73 6

9 Armenia 37390 167 9311 5825 368 6

10 Australia 15303 713 18246 1599 86 1

11 Austria 20558 423 23242 6781 396 6

12 Azerbaijan 30446 11 91 280 40 0

13 Bahamas 382 141 36110 3231 351 1

14 Bahrain 39482 2965 125683 97577 2772 37

15 Bangladesh 226225 7 94 9 0 0

16 Barbados 110 538 60492 6221 119 4

17 Belarus 67251 9822 17452 39154 402 1

18 Belgium 66428 2 26 20 0 0

19 Belize 48 35 1036 699 0 0

20 Benin 1770 0 86 13 4 0

21 Bhutan 99 2647 21478 47056 1752 64

22 Bolivia 71181 294 4930 5274 731 14

23 Bosnia and Herzegovina 10498 2 63 674 53 1

24 Botswana 739 87618 1846641 508116 23284 614

25 Brazil 2442375 11 91 280 40 0

14 COLUMNS, 188 ROWS Column profiling based on top 1000 rows

PREVIEW DOWNLOADED AT 16:55

Remove Top Rows

Specify how many rows to remove from the top.

Number of rows

1

OK Cancel

Query Settings

PROPERTIES

Name covid

APPLIED STEPS

Source

Removed Duplicates

Replaced Value1

Replaced Value

Replaced Value2

Replaced Value3

Renamed Columns

Removed Columns

Renamed Columns1

Covid Dashboard

File Home Transform Add Column View Tools Help

Close & Apply New Source Recent Sources Enter Data Data source settings Manage Parameters Refresh Preview Advanced Editor Query Choose Columns Remove Columns Keep Rows Remove Rows Sort Split Column Group By Data Type: Text Use First Row as Headers Replace Values Merge Queries Append Queries Combine Files Text Analytics Vision Azure Machine Learning All Insights

Queries [1] covid

country Confirmed Deaths Recovered Active New cases New deaths

1 Afghanistan 36263 1269 25198 9796 106 10

2 Albania 4880 144 2745 1991 117 6

3 Algeria 27973 1163 18837 7973 616 8

4 Andorra 907 52 803 52 10 0

5 Angola 950 41 242 667 18 1

6 Antigua and Barbuda 86 3 65 18 4 0

7 Argentina 167416 3059 72575 91782 4890 120

8 Armenia 37390 711 26665 10014 73 6

9 Armenia 37390 167 9311 5825 368 6

10 Australia 15303 713 18246 1599 86 1

11 Austria 20558 423 23242 6781 396 6

12 Azerbaijan 30446 11 91 280 40 0

13 Bahamas 382 141 36110 3231 351 1

14 Bahrain 39482 2965 125683 97577 2772 37

15 Bangladesh 226225 7 94 9 0 0

16 Barbados 110 538 60492 6221 119 4

17 Belarus 67251 9822 17452 39154 402 1

18 Belgium 66428 2 26 20 0 0

19 Belize 48 35 1036 699 0 0

20 Benin 1770 0 86 13 4 0

21 Bhutan 99 2647 21478 47056 1752 64

22 Bolivia 71181 294 4930 5274 731 14

23 Bosnia and Herzegovina 10498 2 63 674 53 1

24 Brazil 2442375 87618 1846641 508116 23284 614

25 Botswana 739 11 91 280 40 0

14 COLUMNS, 187 ROWS Column profiling based on top 1000 rows

PREVIEW DOWNLOADED AT 17:56

Query Settings

PROPERTIES

Name covid

APPLIED STEPS

Source

Removed Duplicates

Replaced Value1

Replaced Value

Replaced Value2

Replaced Value3

Renamed Columns

Removed Columns

Removed Top Rows

Covid Dashboard

File Home Transform Add Column View Tools Help

Close & Apply New Source Recent Enter Data Data source settings Manage Parameters Refresh Preview Advanced Editor Choose Columns Remove Columns Keep Rows Remove Rows Sort Split Column Group By Data Type: Text Use First Row as Headers Replace Values Merge Queries Append Queries Combine Files Text Analytics Vision Azure Machine Learning All Insights

Queries [1] covid = Table.TransformColumnTypes(#"Removed Top Rows",{{"Confirmed", type number}})

country	Confirmed	Deaths	Recovered	Active	New cases	New deaths
1 Afghanistan	36263	1269				
2 Albania	4880	144				
3 Algeria	27973	1163				
4 Andorra	907	52				
5 Angola	950	41				
6 Antigua and Barbuda	86	3				
7 Argentina	167416	3059				
8 Armenia	37390	711				
9 Australia	15303	167				
10 Austria	20558	713				
11 Azerbaijan	30448	423				
12 Bahamas	382	11				
13 Bahrain	39482	141				
14 Bangladesh	226225	2965				
15 Barbados	110	7				
16 Belarus	67251	538				
17 Belgium	66428	9822				
18 Belize	48	2				
19 Benin	1770	35				
20 Bhutan	99	0				
21 Bolivia	71181	2647				
22 Bosnia and Herzegovina	10498	294				
23 Botswana	739	2				
24 Brazil	2442375	87618				
25 Brunei	141	3				
26 Bulgaria	10621	347				
27 Burkina Faso	1100	53				

14 COLUMNS, 187 ROWS Column profiling based on top 1000 rows

29°C Haze Search ENG US 22:10 12-04-2024

Covid Dashboard - Last saved: Today at 1:13 AM

File Home Help Table tools

Name covid

Mark as date table Manage relationships New measure Quick measure New table Calculations

country	Confirmed	Deaths	Recovered	Active	New cases	New deaths	New recovered	Deaths / 100 cases	Recovered / 100 cases	Deaths / 100 Recovered
Bhutan	99	0	86	13	4	0	1	0	86.87	0
Senegal	9764	194	6477	3093	83	3	68	1.99	66.34	3
Madagascar	9690	91	6260	3339	395	6	681	0.94	64.6	1.45
Angola	950	41	242	667	18	1	0	4.32	25.47	16.94
Egypt	92482	4652	34838	52992	420	46	1007	5.03	37.67	13.35
Chad	922	75	810	37	7	0	0	8.13	87.85	9.26
Norway	9132	255	8752	125	15	0	0	2.79	95.84	2.91
Andorra	907	52	803	52	10	0	0	5.73	88.53	6.48
Malaysia	8904	124	8601	179	7	0	1	1.39	96.6	1.44
Congo (Kinshasa)	8844	208	5700	2936	13	4	190	2.35	64.45	3.65
Togo	874	18	607	249	6	0	8	2.06	69.45	2.97
China	86783	4656	78869	3258	213	4	7	5.37	90.88	5.9
Sao Tome and Principe	865	14	734	117	2	0	38	1.62	84.86	1.91
Liechtenstein	86	1	81	4	0	0	0	1.16	94.19	1.23
Antigua and Barbuda	86	3	65	18	4	0	5	3.49	75.58	4.62
Jamaica	853	10	714	129	11	0	0	1.17	83.7	1.4
Kazakhstan	84648	585	54404	29659	1526	0	1833	0.69	64.27	1.08
Philippines	82040	1945	26446	53649	1592	13	336	2.37	32.24	7.35
Russia	816680	13334	602249	201097	5607	85	3077	1.63	73.74	2.21
Ecuador	81161	5532	34896	40733	467	17	0	6.82	43	15.85
Sweden	79395	5700	0	73695	398	3	0	7.18	0	inf
Oman	77058	393	57028	19637	1053	9	1729	0.51	74.01	0.69
Kosovo	7413	185	4027	3201	496	16	274	2.5	54.32	4.59
Finland	7398	329	6920	149	5	0	0	4.45	93.54	4.75
Botswana	739	2	63	674	53	1	11	0.27	8.53	3.17
Haiti	7340	158	4365	2817	25	1	0	2.15	59.47	3.62
Tajikistan	7235	60	6028	1147	43	1	58	0.83	83.32	1

Table: covid (187 rows)

Search covid

- 1 week change
- Active
- Confirmed
- Confirmed last week
- country
- Deaths
- Deaths / 100 cases
- Deaths / 100 Recovered
- New cases
- New deaths
- New recovered
- Recovered / 100 cases
- WHO Region

18:02 12-04-2024

Covid -19 Dashboard

Confirmed

16.48M

Deaths

654.04K

Active

6.36M

Recovered

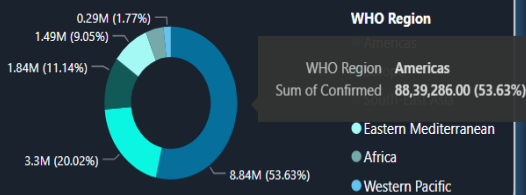
9.47M

New cases

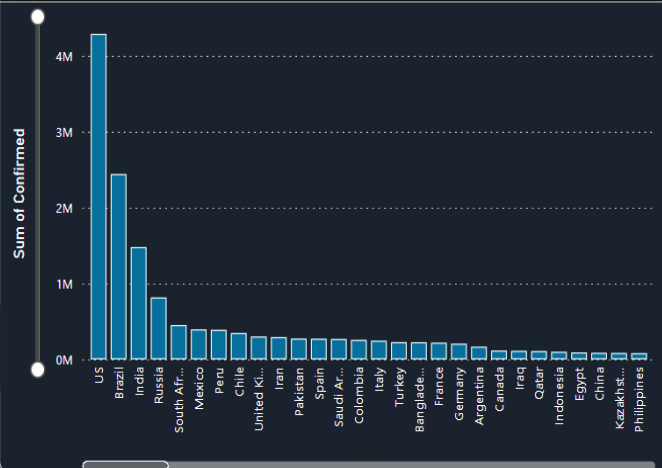
228.69K



Confirmed cases in each region



Confirmed cases in each country



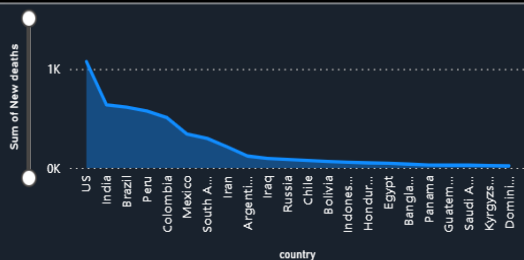
Deaths

654.04K

New Deaths

5.42K

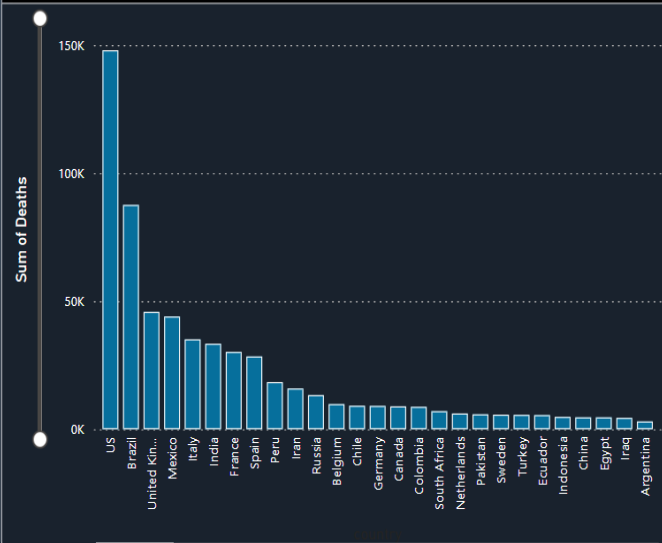
New deaths in each country

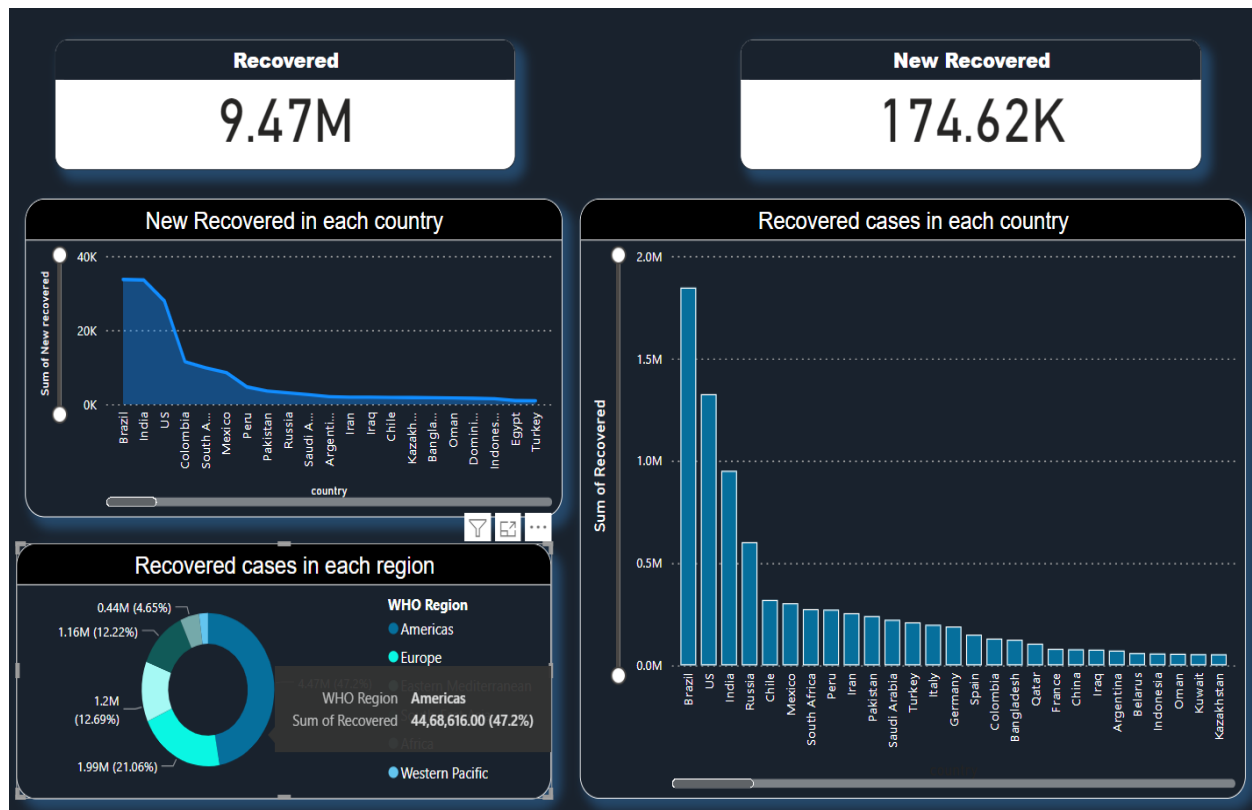


Death cases in each region



Death cases in each country





7. Future Scope of Project:

- **Epidemiological Modeling:** Develop and refine models to predict the spread of COVID-19, assess the effectiveness of public health interventions, and forecast future outbreaks. This could involve incorporating new data sources, refining model parameters, and adapting to changes in virus transmission patterns.
- **Variant Analysis:** Monitor the emergence and spread of new variants of the virus and assess their impact on transmission, severity, and vaccine effectiveness. Analyze genomic data to understand the genetic diversity of the virus and its implications for public health measures.
- **Vaccine Effectiveness:** Evaluate the real-world effectiveness of COVID-19 vaccines in different populations and settings. This could involve analyzing vaccine coverage, breakthrough infections, and the impact of vaccination on reducing transmission and severe disease.
- **Healthcare Capacity Planning:** Use data analysis to assess healthcare capacity, including hospitalizations, ICU admissions, and ventilator usage. Forecast future healthcare needs based on projected COVID-19 case counts and severity trends.
- **Policy and Decision Support:** Provide data-driven insights to policymakers and public health officials to support decision-making on mitigation measures, vaccination strategies, and resource allocation.

- **Social and Economic Impacts:** Assess the social and economic impacts of the pandemic, including employment trends, income disparities, and mental health outcomes. Use data analysis to inform policy responses and support vulnerable populations.
- **Public Health Messaging:** Evaluate the effectiveness of public health messaging and communication strategies in promoting vaccination, encouraging preventive behaviors, and countering misinformation. Use data analysis to identify effective messaging strategies and target specific populations.

8. Conclusion:

In this study, we set out to analyze various facets of the COVID-19 pandemic, aiming to provide insights into its spread, impacts, and response strategies. Leveraging a combination of epidemiological data, vaccination records, and genomic sequencing data, we conducted a comprehensive analysis to address the objectives outlined at the outset of the project.

We observed fluctuations in COVID-19 case counts over time, with periods of rapid spread followed by periods of relative stability. Hotspots of transmission were identified in densely populated urban areas, underscoring the importance of targeted intervention strategies.

Investments in healthcare infrastructure and workforce capacity are critical to ensure readiness for future surges in COVID-19 cases. Collaboration between public health agencies, healthcare providers, and community organizations is vital to optimize resource allocation and coordination.

In conclusion, this study contributes to our understanding of the COVID-19 pandemic and informs strategies to mitigate its impact on public health and society. By leveraging data-driven approaches and interdisciplinary collaboration, we can work towards a more resilient and equitable response to this global health crisis.

9. Bibliography :

For datasets:

<https://www.kaggle.com/datasets/imdevskp/corona-virus-report>

For matplotlib , numpy, pandas libraries:

https://www.w3schools.com/python/matplotlib_intro.asp

For plotly library :

<https://neptune.ai/blog/plotly-python-tutorial-for-machine-learning-specialists>

Other references:

https://en.m.wikipedia.org/wiki/Data_science