import numpy as np *# linear algebra*

import pandas as pd *# data processing, CSV file I/O (e.g. pd.read\_csv)* import matplotlib.pyplot as plt import seaborn as sns import os for dirname, \_, filenames **in** os.walk('/kaggle/input'): for filename **in** filenames: print(os.path.join(dirname, filename))

path="../input/covid19-daily-data-updated/Covid-19\_data\_version\_8.csv" covid\_data=pd.read\_csv(path, parse\_dates=True)

*#vaccine\_data.tail()*

covid\_data=covid\_data.sort\_values(by='date')

covid\_data.people\_vaccinated\_per\_hundred=covid\_data.people\_vaccinated\_p er\_hundred/10

covid\_data=covid\_data.rename(columns={'people\_vaccinated\_per\_hundred':' people\_vaccinated\_per\_thousand'})

covid\_data.columns

high=covid\_data.groupby('location').total\_cases.agg([max]).sort\_values( by='max', ascending=False) high.iloc[:18 , :]

deaths=pd.DataFrame({'total\_deaths':covid\_data.groupby('continent').new

\_deaths.sum()}) deaths

cases=pd.DataFrame({'total\_cases':covid\_data.groupby('continent').new\_c ases.sum()}) cases

cases\_per\_mil=covid\_data.groupby('continent').total\_cases\_per\_million.m ean() cases\_per\_mil

*#covid\_data.iloc[112463,0:33]*

covid\_data.female\_smokers=covid\_data.female\_smokers.fillna(0) covid\_data.male\_smokers=covid\_data.male\_smokers.fillna(0) male=covid\_data.male\_smokers.notnull()

covid\_data.female\_smokers=covid\_data.female\_smokers+covid\_data.male\_smo kers

covid\_data=covid\_data.rename(columns={'female\_smokers':'smokers'}) covid\_data.drop('male\_smokers' ,axis=1,inplace=True) covid\_data.people\_vaccinated\_per\_thousand covid\_data\_asia=covid\_data.continent=='Asia' plt.figure(figsize=(20,10)) *#covid\_data\_cont.isnull=0*

plt.title('Spread of covid-19 in different Continents')

sns.barplot(x=cases.index , y= cases.total\_cases) plt.legend()

covid\_data\_asia=covid\_data.continent=='Asia' plt.figure(figsize=(20,10)) *#covid\_data\_cont.isnull=0*

plt.title('Total deaths due to covid-19 in different Continents')

sns.barplot(x=deaths.index , y= deaths.total\_deaths) low=np.arange(0,35,0.1)

covid\_data.smokers=covid\_data.smokers.astype(int)

covid\_data.smokers=covid\_data['smokers'].replace(np.arange(0,25),"Low") covid\_data.smokers=covid\_data['smokers'].replace(np.arange(25,100),"Hig h")

smoker\_deaths=pd.DataFrame({'total\_deaths':covid\_data.groupby('smokers'

).new\_deaths.sum()}) smoker\_deaths

covid\_data\_asia=covid\_data.continent=='Asia' plt.figure(figsize=(20,10)) *#covid\_data\_cont.isnull=0*

plt.title('Total deaths due to covid-19 of smokers ')

sns.barplot(x=smoker\_deaths.index, y= smoker\_deaths.total\_deaths) plt.legend

covid\_data\_asia=covid\_data.continent=='Asia' plt.figure(figsize=(20,10)) *#covid\_data\_cont.isnull=0*

plt.title('Spread of covid-19 & Vaccination')

sns.scatterplot(x=covid\_data.people\_vaccinated\_per\_thousand , y= covid\_ data.new\_cases) plt.legend()

covid\_data\_asia=covid\_data.continent=='Asia' plt.figure(figsize=(20,10)) *#covid\_data\_cont.isnull=0*

plt.title('Total deaths due to covid-19 in different Continents')

sns.scatterplot(x=covid\_data.total\_cases , y= covid\_data.total\_deaths) *#2%*

avg=covid\_data.new\_deaths.mean() avg\_cas=covid\_data.new\_cases.mean()

covid\_data.new\_deaths=covid\_data.new\_deaths.fillna(avg) covid\_data.new\_cases=covid\_data.new\_cases.fillna(avg\_cas) r=(covid\_data.new\_deaths/covid\_data.new\_cases)\*100

covid\_data.insert(2,"Mortality",r) covid\_data

covid\_data\_asia=covid\_data.continent=='Asia' plt.figure(figsize=(20,10)) *#covid\_data\_cont.isnull=0* plt.title('Comparison of gdp to mortality rate') avg=covid\_data.total\_deaths.mean() avg\_cas=covid\_data.total\_cases.mean()

rate=(covid\_data.total\_deaths/covid\_data.total\_cases)\*100 print(rate)

sns.scatterplot(x=covid\_data.gdp\_per\_capita , y= covid\_data.Mortality)

*#2%*

covid\_data\_asia=covid\_data.continent=='Asia' plt.figure(figsize=(20,10)) *#covid\_data\_cont.isnull=0*

plt.title('Comparison of median age to mortality rate')

sns.scatterplot(x=covid\_data.median\_age , y= covid\_data.Mortality)

*#2%*

**DONE BY**

**AMALKRISHNA MU**

**720921244004**

**3RD YEAR CSBS JCT COLLEGE OF ENGINEERING AND TECHNOLOGY**