COVID 19 VACCINATION ANALYSIS

Batch member

Phase-3 submission document

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Introduction to COVID-19:

- ❖ COVID-19, or Coronavirus Disease 2019, is a viral respiratory illness caused by the novel coronavirus, SARS-CoV-2. It was first identified in Wuhan, China, in late 2019 and rapidly spread around the world, leading to a global pandemic. This infectious disease has had a profound impact on public health, economies, and daily life, with symptoms ranging from mild respiratory issues to severe pneumonia. Various preventive measures, including vaccination, mask-wearing, and social distancing, have been employed to combat its spread and minimize its impact.
- ❖ Analyzing COVID-19 vaccination efforts involves examining various aspects of the global response to the pandemic. This includes the development, distribution, and administration of vaccines, as well as their impact on public health, economy, and society. Analysis can focus on vaccination rates, vaccine efficacy, equity in access, challenges in deployment, and the evolving strategies to combat the virus. It's a multidimensional topic with implications for healthcare, policy, and social well-being.

Dataset:

Context

- Data is collected daily from Our World in Data GitHub repository for covid-19, merged and uploaded. Country level vaccination data is gathered and assembled in one single file. Then, this data file is merged with locations data file to include vaccination sources information. A second file, with manufacturers information, is included.

Content

- The data (country vaccinations) contains the following information:

Country- this is the country for which the vaccination information is provided;

Country ISO Code - ISO code for the country;

Date - date for the data entry; for some of the dates we have only the daily vaccinations, for others, only the (cumulative) total;

Total number of vaccinations - this is the absolute number of total immunizations in the country;

Total number of people vaccinated - a person, depending on the immunization scheme, will receive one or more (typically 2) vaccines; at a certain moment, the number of vaccination might be larger than the number of people;

Total number of people fully vaccinated - this is the number of people that received the entire set of immunization according to the immunization scheme (typically 2); at a certain moment in time, there might be a certain number of people that received one vaccine and another number (smaller) of people that received all vaccines in the scheme;

Daily vaccinations (raw) - for a certain data entry, the number of vaccination for that date/country;

Daily vaccinations - for a certain data entry, the number of vaccination for that date/country;

Total vaccinations per hundred - ratio (in percent) between vaccination number and total population up to the date in the country;

Total number of people vaccinated per hundred - ratio (in percent) between population immunized and total population up to the date in the country;

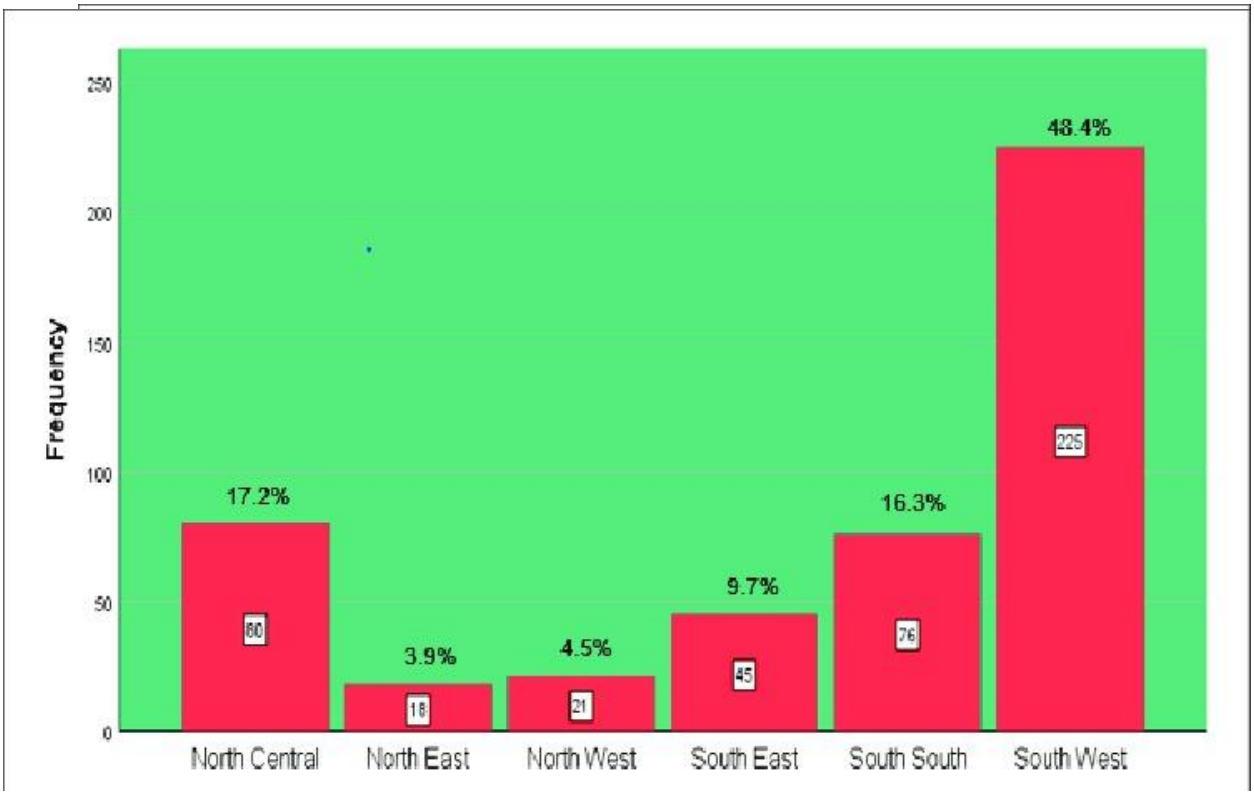
Total number of people fully vaccinated per hundred - ratio (in percent) between population fully immunized and total population up to the date in the country;

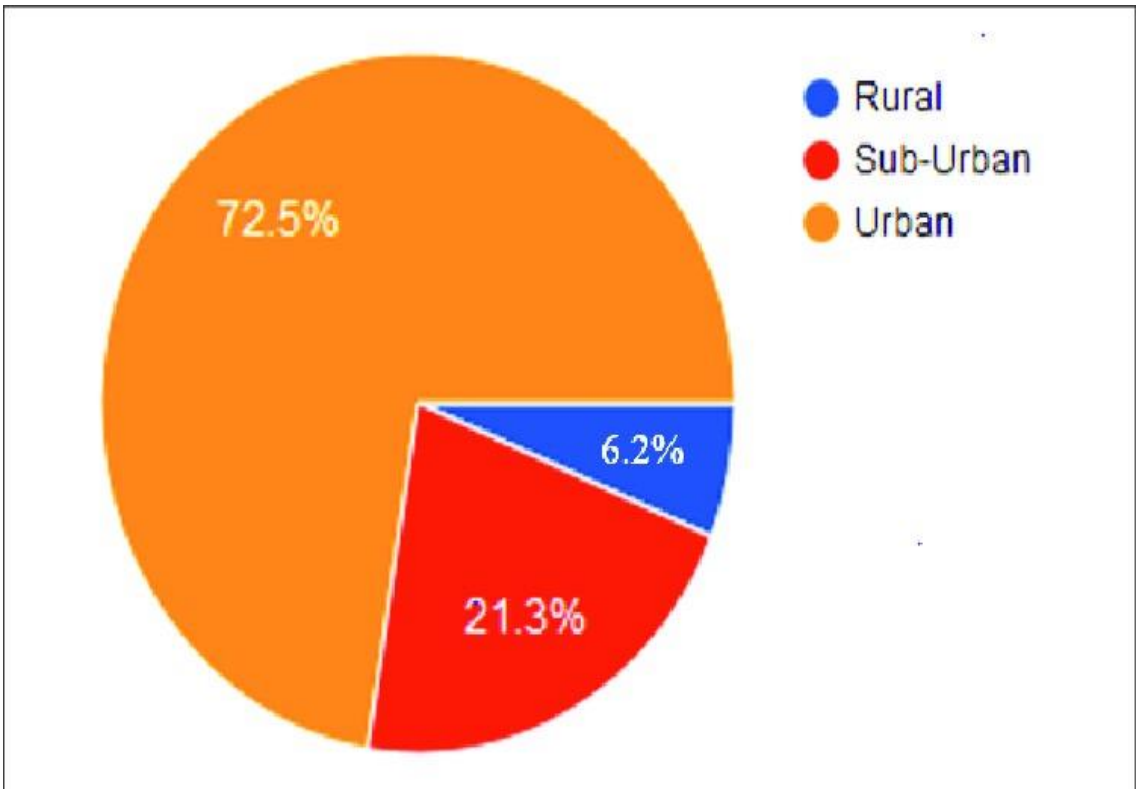
Number of vaccinations per day - number of daily vaccination for that day and country;

Daily vaccinations per million - ratio (in ppm) between vaccination number and total population for the current date in the country;

Vaccines used in the country - total number of vaccines used in the country (up to date);

Source name - source of the information (national authority, international organization, local organization etc.);





Code

```
import numpy as np

import pandas as pd

import matplotlib.pyplot as plt



data = pd.read_csv('case_time_series.csv')

Y = data.iloc[61:,1].values
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R = data.iloc[61:,3].values

D = data.iloc[61:,5].values

X = data.iloc[61:,0]

plt.plot(X,Y)

Output:

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