COVID Vaccines analysis

This project is about "**COVID Vaccination Progress**" Data Analysis with Python. Collected this Dataset from "Kaggle" which is the world's largest data science community with powerful tools and resources.
This dataset contains 35310 rows and 15 columns which is really informaive to analysis. In this project,an attempt has been made to analyze various information of COVID-19 World Vaccination Progress such as country, total_Vaccinations, people_vaccinated, daily_vaccinations total_vaccinations_per_hundred, people_vaccinated_per_hundred, people_fully_vaccinated_per_hundred, vaccines and many more.

Library Used:

- pandas
- matplotlib
- seaborn

Data Preparation and Cleaning

- Load the dataset into a data frame using Pandas
- Explore the number of rows & columns, ranges of values etc.
- Handle missing, incorrect and invalid data

Explore The Number of daily vaccinations dynamic

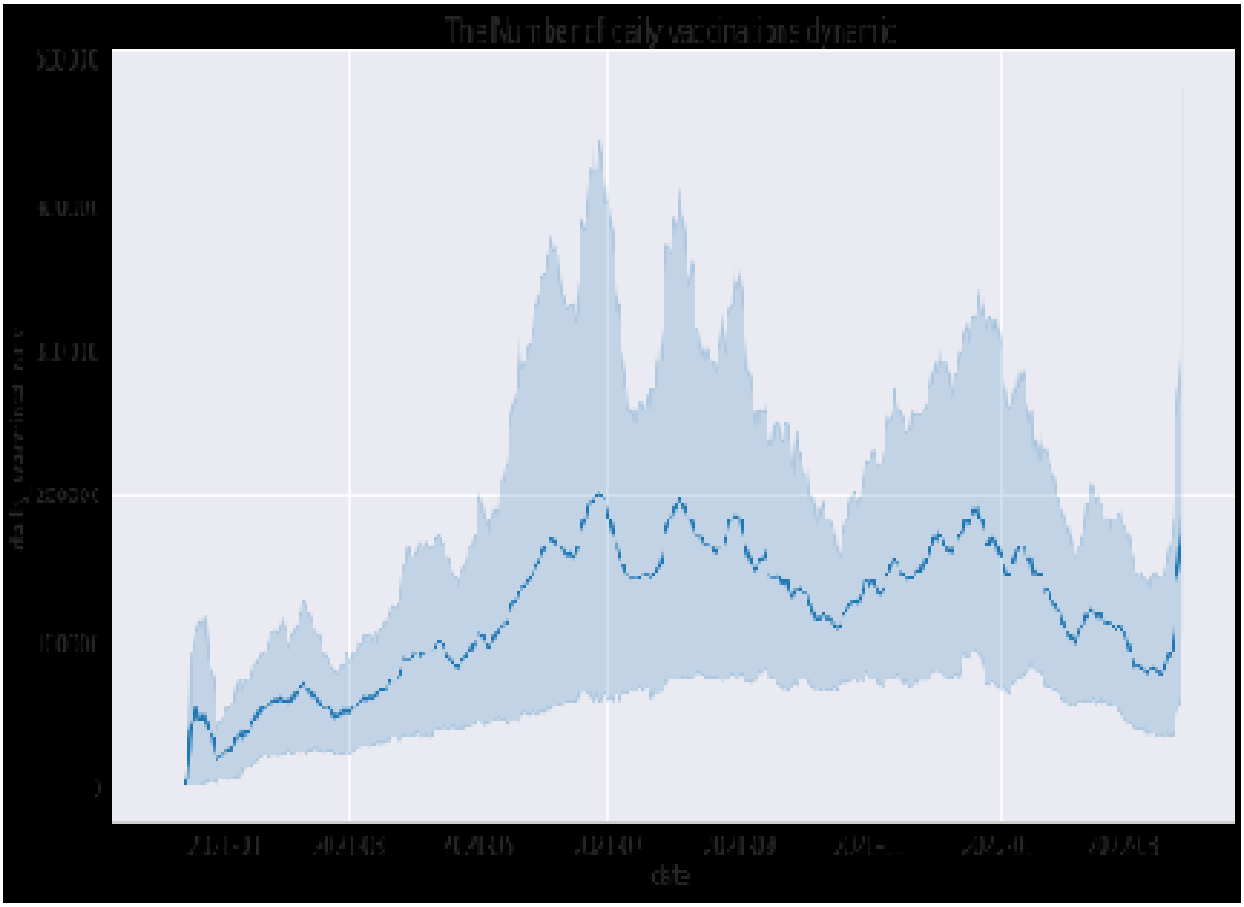
Code:

```
plt.figure(figsize=(16,8))
sns.lineplot(x=vaccinations_df.date, y=vaccinations_df.daily_vaccinations)
```

```
plt.title('The Number of daily vaccinations dynamic')
plt.show()
```

output

E



Explore the Vaccination procedure go on rapidly from which date.

countries = vaccinations_df.groupby('country')['total_vaccinations'].max ().sort_values(ascending= False 5].index

top_countries = pd.DataFrame(columns= vaccinations_df.columns)
for country in countries:

```
    top_countries = top_countries.append(vaccinations_df.loc[vaccination
s_df['cou countries = vaccinations_df.groupby('country')['total_vaccinations'].max
().sort_values(ascending= False)[:5].index


top_countries = pd.DataFrame(columns= vaccinations_df.columns)
for country in countries:
    top_countries = top_countries.append(vaccinations_df.loc[vaccinations_df['coun
try'] == country])
plt.figure(figsize=(20,8))
sns.lineplot(top_countries['date'], top_countries['daily_vaccinations_per_million'],
hue= top_countries['country'], ci= False)
plt.title('Vaccination procedure go on rapidly');
/opt/conda/lib/python3.7/site-packages/seaborn/_decorators.py:43: FutureWarning:
Pass the following variables as keyword args: x, y. From version 0.12, the only vali
d positional argument will be `data`, and passing other arguments without an explic
it keyword will result in an error or misinterpretation.
  FutureWarningntry'] == country])


plt.figure(figsize=(20,8))
sns.lineplot(top_countries['date'], top_countries['daily_vaccinations_per
_million'], hue= top_countries['country'], ci= False)
plt.title('Vaccination procedure go on rapidly');
/opt/conda/lib/python3.7/site-packages/seaborn/_decorators.py:43: Futur
eWarning: Pass the following variables as keyword args: x, y. From vers
ion 0.12, the only valid positional argument will be `data`, and passing o
ther arguments without an explicit keyword will result in an error or misi
nterpretation.
  FutureWarning
```

Output:

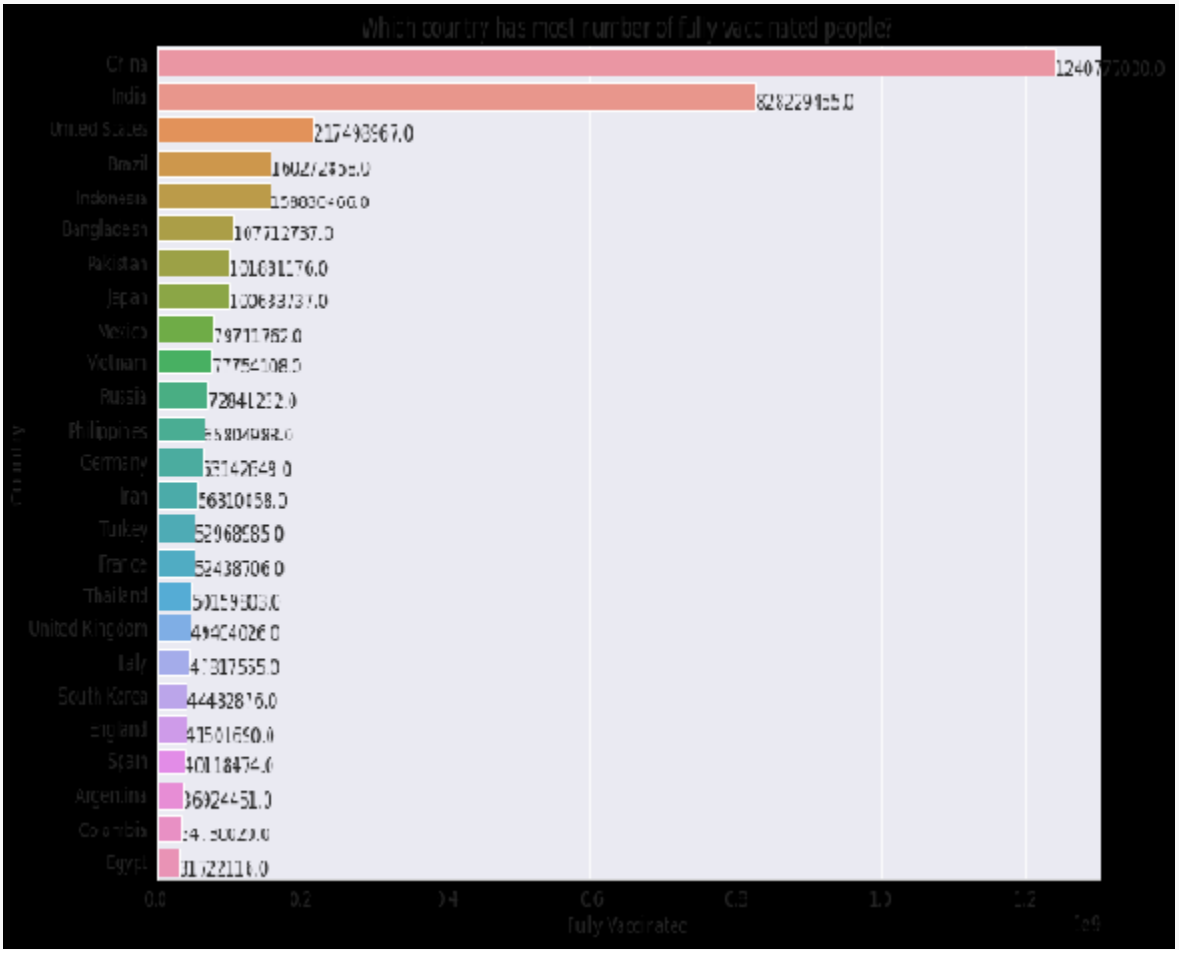
Code:

```
plt.figure(figsize=(16,10))
ax = sns.barplot(x=fully_vaccinated, y=fully_vaccinated.index)
plt.xlabel("Fully Vaccinated")
plt.ylabel("Country");
plt.title('Which country has most number of fully vaccinated people?');

for patch in ax.patches:
    width = patch.get_width()
    height = patch.get_height()
    x = patch.get_x()
    y = patch.get_y()
```

```
plt.text(width + x, height + y, '{:.1f} '.format(width))
```

Output:



Code:

```
plt.figure(figsize=(12,8))
ax = sns.barplot(x=daily_vaccinations_per_million, y=daily_vaccinations_per_million.index )
plt.xlabel("daily vaccinations per million")
plt.ylabel("Country")
```

```
plt.title("Daily COVID-19 vaccine doses administered per million peopl
e");

for patch in ax.patches:
    width = patch.get_width()
    height = patch.get_height()
    x = patch.get_x()
    y = patch.get_y()

    plt.text(width + x, height + y, '{:.1f} '.format(width))
```

Output: