

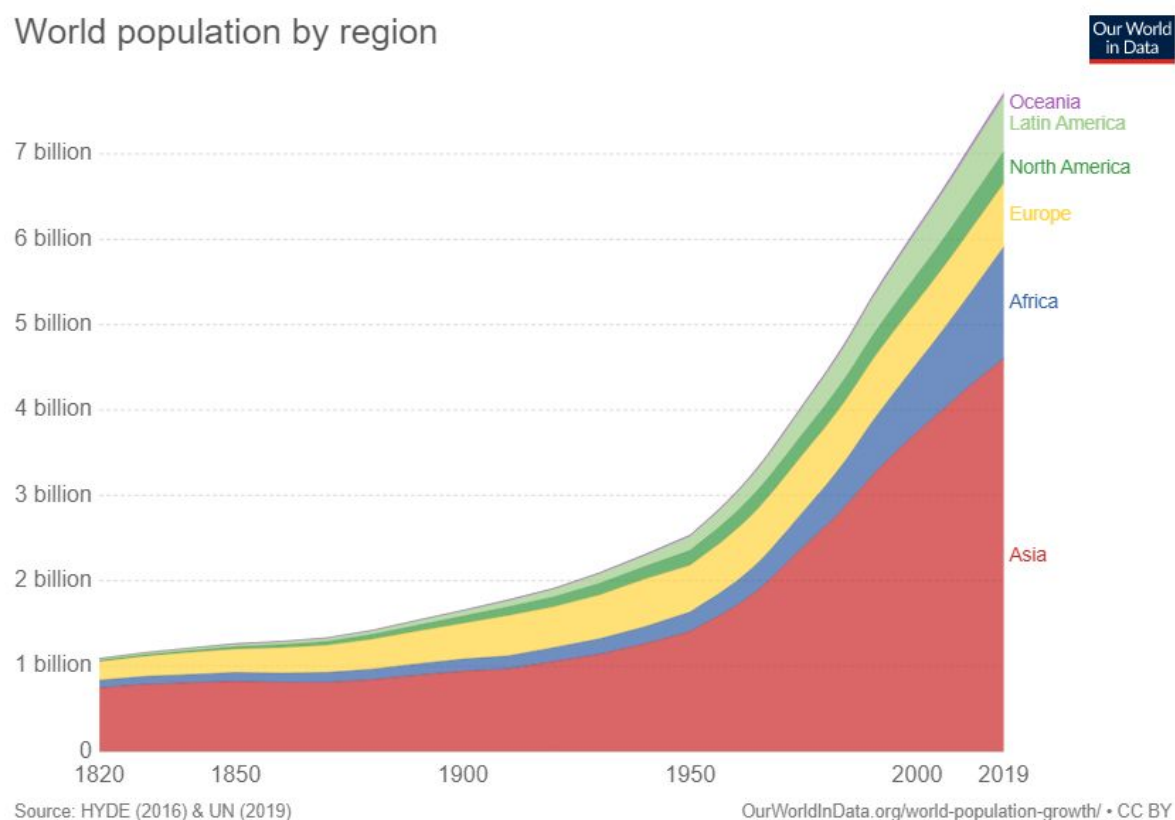
World’s population by region data in tabular format

		Country	Start		
Country	Start	Asia	745.26 million in 1820	Country	Start
Afghanistan	3.32 million in 1820	Australia	334,002.00 in 1820	Bhutan	91,144.00 in 1820
Africa	89.18 million in 1820	Austria	3.39 million in 1820	Bolivia	1.12 million in 1820
Albania	438,671.00 in 1820	Azerbaijan	901,772.00 in 1820	Bonaire Sint Eustatius and Saba	7,000.00 in 1950
Algeria	2.71 million in 1820	Bahamas	27,404.00 in 1820	Bosnia and Herzegovina	871,970.00 in 1820
American Samoa	19,000.00 in 1950	Bahrain	64,474.00 in 1820	Botswana	121,000.00 in 1820
Andorra	2,700.00 in 1820	Bangladesh	20.12 million in 1820	Brazil	4.58 million in 1820
Angola	1.60 million in 1820	Barbados	85,456.00 in 1820	British Virgin Islands	7,000.00 in 1950
Anguilla	5,000.00 in 1950	Belarus	2.41 million in 1820	Brunei	2,251.00 in 1820
Antigua and Barbuda	37,000.00 in 1820	Belgium	3.48 million in 1820	Bulgaria	2.19 million in 1820
Argentina	570,719.00 in 1820	Belize	25,556.00 in 1820	Burkina Faso	1.70 million in 1820
Armenia	423,527.00 in 1820	Benin	653,348.00 in 1820	Burundi	917,804.00 in 1820
Aruba	38,000.00 in 1950	Bermuda	37,000.00 in 1820	Cambodia	2.10 million in 1820
...	745.26 million			Cameroon	1.87 million in 1820

Country	Start
Canada	879,432.00 in 1820
Cape Verde	57,062.00 in 1820
Cayman Islands	6,000.00 in 1950
Central African Republic	485,538.00 in 1820
Chad	1.43 million in 1820
Channel Islands	102,000.00 in 1950
Chile	820,889.00 in 1820
China	380.06 million in 1820
Colombia	1.27 million in 1820
Comoros	57,537.00 in 1820
Congo	320,596.00 in 1820
Cook Islands	15,000.00 in 1950
Costa Rica	63,375.00 in 1820

Data visualization region wise as per the population of the above data

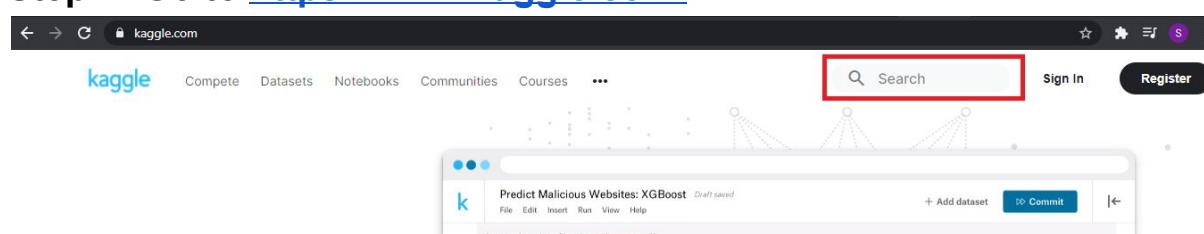
## World population by region



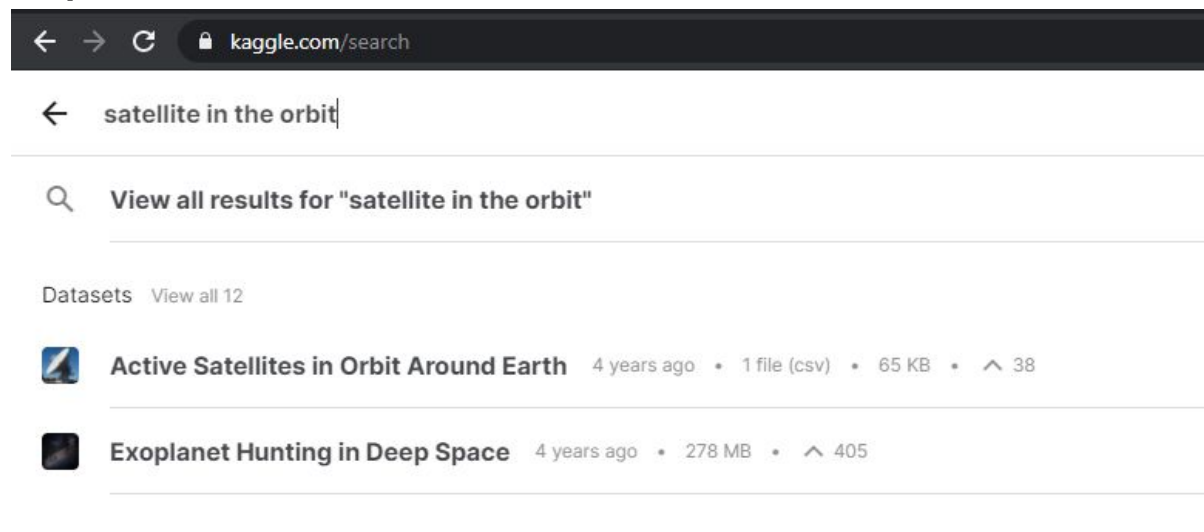
## [How to find a dataset to work on?](#)

You can find sample datasets on <https://www.kaggle.com/> , Kaggle is the world's largest data science community with powerful tools and resources to help you achieve your data science goals.

### Step 1: Go to <https://www.kaggle.com/>



### Step 2: Click on the search bar and enter - “satellite in the orbit” and press enter



You will get a list of dataset, topics and notebooks but we want a dataset

### Step 3: select a dataset

← → ↺ 🔒 kaggle.com/search?q=satellite+in+the+orbit

← satellite in the orbit

Searching for satellite in the orbit within

💬 Comments 26

📁 Datasets 12

💬 Topics 9

🔗 Notebooks 4

Filter by

Date

🕒 Last 90 days

5

Dataset Size

☐ small

6

☐ medium

4

☐ large

2

Dataset File Types

☐ csv

6

☐ jpg


1

☐ json

1

51 Results

Sort by: Relevancy ▾




Dataset

Active Satellites in Orbit Around Earth

by Union of Concerned Scientists

4 years ago • 65 KB • ^ 38

Active Satellites in Orbit Around Earth



Dataset

Exoplanet Hunting in Deep Space

by WΔ

4 years ago • 56 MB • ^ 405

Exoplanet Hunting in Deep Space

Click on this dataset to select it

It will take you to the dataset page and if you scroll down you can find the data in tabular format

← → ↺ 🔒 kaggle.com/ucusa/active-satellites

Sign In Register

Dataset

Active Satellites in Orbit Around Earth

Which country has the most satellites in orbit? What are they used for?

Union of Concerned Scientists • updated 4 years ago (Version 1)

Data

Tasks

Notebooks (7)

Discussion (1)

Activity

Metadata

Download (65 KB)

New Notebook

Usability 8.2

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Tags science and technology

Description

Data Explorer

336.4 KB

database.csv

database.csv (336.4 KB)

Detail Compact Column

10 of 26 columns ▾

About this file

Active satellites in orbit (July 2016 database version)

Official Name of ...	Country/Organiza...	Operator/Owner	Country of Opera...	Users
1415 unique values	USA	Ministry of Defense	USA	Commercial
	NR	Iridium Satellite LLC	China	Government
	Other (603)	Other (1264)	Other (679)	Other (579)
AAUSat-4	NR	University of Aalborg	Denmark	Civil
ABS-2	NR	Asia Broadcast Satellite Ltd.	Multinational	Commercial

We check if this is the data that we required and download it

Step 4: Sign in to download the dataset

← → ↺ 🔒 kaggle.com/ucusa/active-satellites

Sign In Register

Dataset

Active Satellites in Orbit Around Earth

Which country has the most satellites in orbit? What are they used for?

Select the sign in option



[Sign In](#) [Register](#)

Sign in with Google

Sign in with your email

Sign in with Facebook

Sign in with Yahoo

No Account? [Create one.](#)

## Step 5 : Once signed in you can download the dataset

[Data](#) [Tasks](#) [Notebooks \(7\)](#) [Discussion \(1\)](#) [Activity](#) [Metadata](#)

[Download \(65 KB\)](#) [New Notebook](#)

**Data Explorer**  
336.4 KB  
[database.csv](#)

< database.csv (336.4 KB)

Detail

Compact

Column

10 of 26 columns

About this file

Active satellites in orbit (July 2016 database version)

Official Name of ...	Country/Organiza...	Operator/Owner	Country of Opera...	Users
1415 unique values	USA 30% NR 28% Other (603) 42%	Ministry of Defense 6% Iridium Satellite LLC 5% Other (1264) 89%	USA 40% China 13% Other (679) 48%	Commercial 39% Government 20% Other (579) 41%
AAUSat-4	NR	University of Aalborg	Denmark	Civil
ABS-2	NR	Asia Broadcast Satellite Ltd.	Multinational	Commercial

## How to open a Jupyter notebook.

### Open Anaconda Navigator

ANACONDA NAVIGATOR

Upgrade Now

Sign in to Anaconda

Home

Environments

Learning

Community

Applications on base (root)

Channels

CMD.exe Prompt

0.1.1

Run a cmd.exe terminal with your current environment from Navigator activated

Launch

JupyterLab

2.1.5

An extensible environment for interactive and reproducible computing, based on the Jupyter Notebook and Architecture.

Launch

Jupyter Notebook

6.0.3

Web-based, interactive computing notebook environment. Edit and run human-readable docs while describing the data analysis.

Launch

Powershell Prompt

0.0.1

Run a Powershell terminal with your current environment from Navigator activated

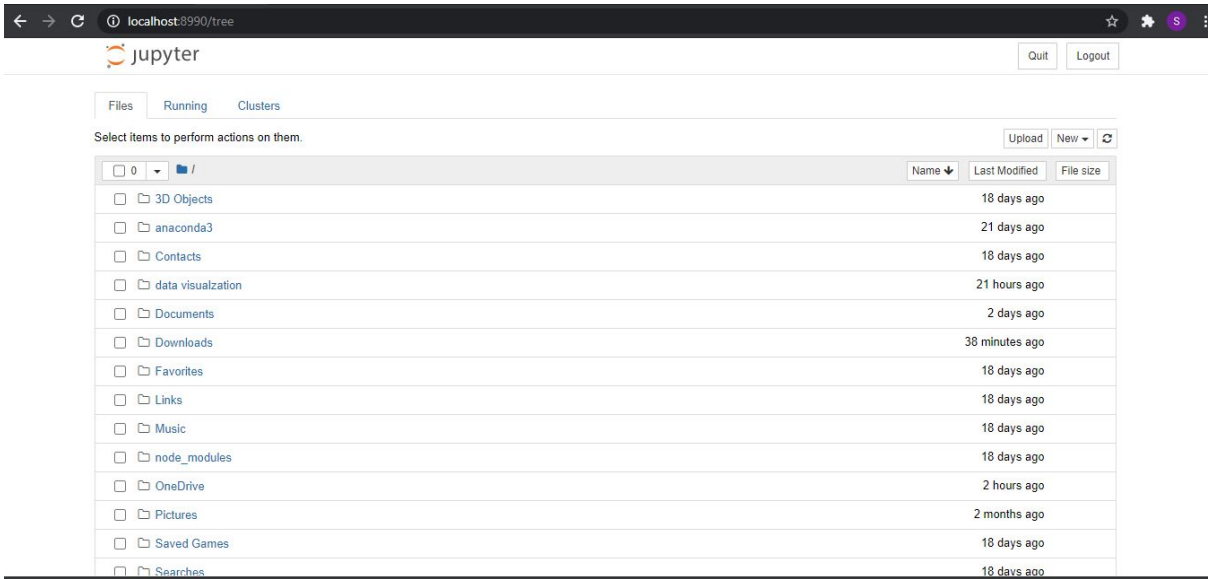
Launch

You can see we have a jupyter notebook there below it and we have a launch button. Click on the launch

button and it will open the jupyter notebook in your browser.



Opens a jupyter notebook like this -

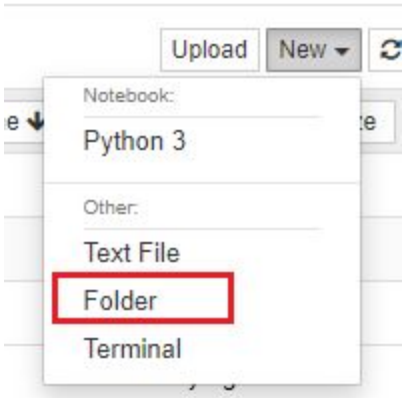


[Creating a new folder in jupyter notebook here](#)

Click on new dropdown, it will open the dropdown menu,

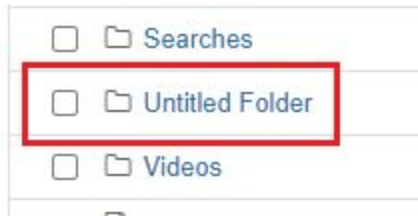


The dropdown menu contains folder and files , first we will create a folder



When clicked on folder it will create a folder named “Untitled Folder”





you can rename it by clicking on the checkbox beside it   and click on rename button



 1   / to rename it

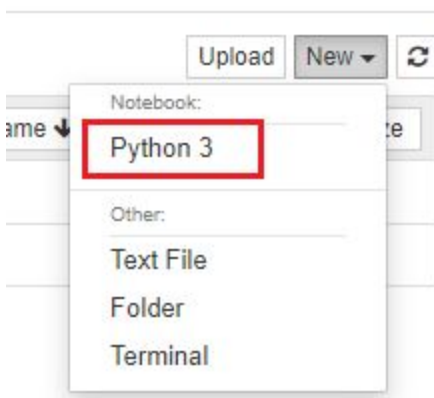
Once the folder is created double click on the folder to open it and create a python file

### [Creating a new file in jupyter notebook](#)

Click on new dropdown, it will open the dropdown menu,



The dropdown menu contains folders and files , we will now create a file.



This will open a python notebook in the new tab of your browser. This is were you can start with your code.

Class Activities

1) Activity -1 - Plot a bar graph for top 5 Country/Organization who has the most number of Satellites In Space

Code:

```
#Q - Plot a bar graph for top 5 Country/Organization who has the most number of Satellites In Space

import numpy as np
import pandas as pd
from matplotlib import pyplot as plt

dataframe = pd.read_csv('country_satellites.csv')

top_5 = dataframe.head(5)
print(top_5)
name = top_5['Country/Organization Name']
number = top_5['Satellites In Orbit']

plt.xlabel("Country/Organization Name")
plt.xticks(rotation='vertical')
plt.ylabel("Satellites In Orbit")

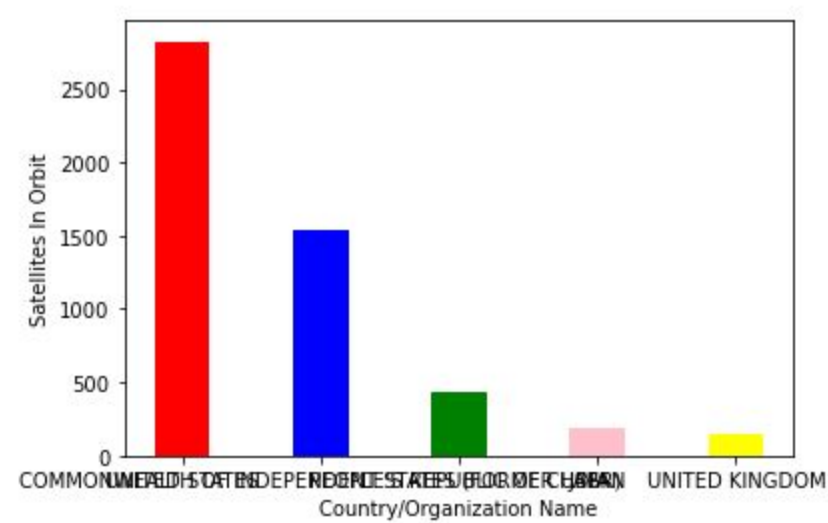
label = name
value = number
plt.bar(label, value,width=0.4, color=('red','blue','green','pink','yellow')) #bar-grap
```

Output:

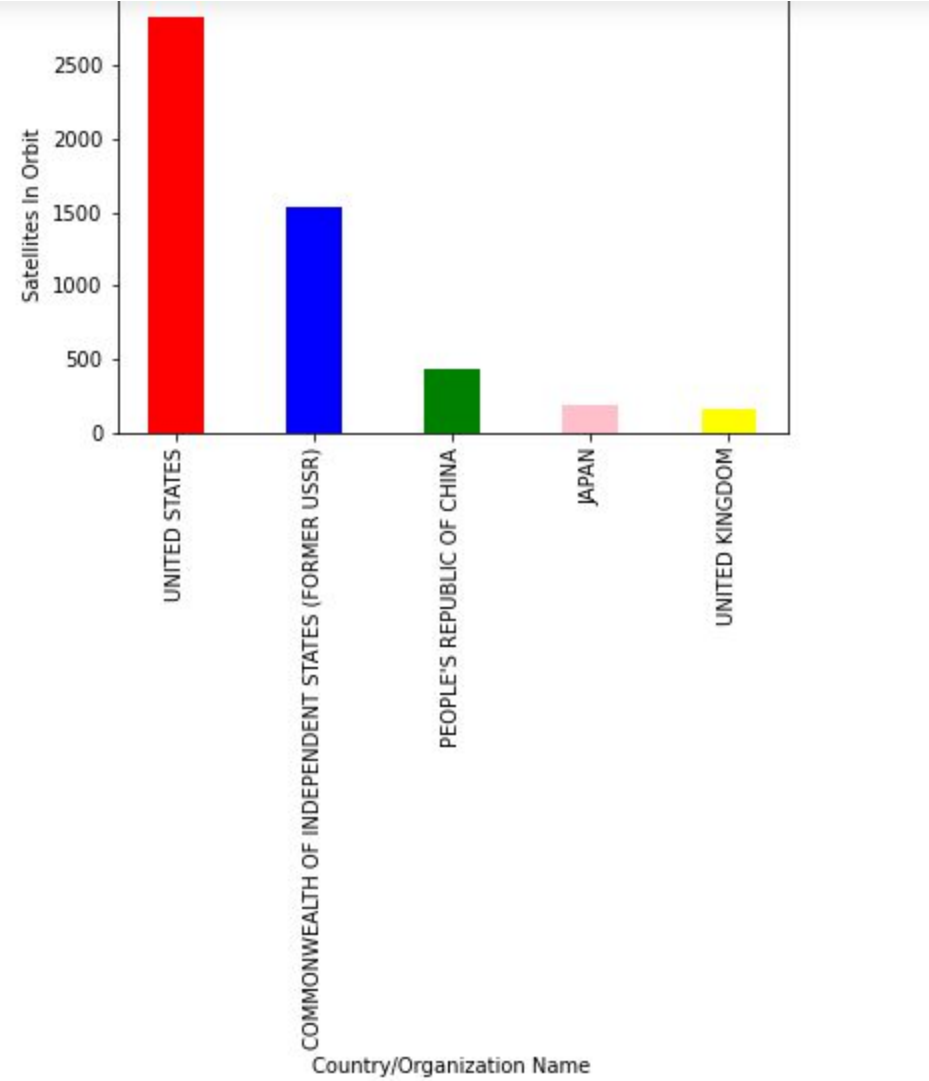
This is the output of print(top\_5) - as the top\_5 variable holds the 1st 5 rows of the dataset(table)

	Country/Organization Name	Satellites In Orbit
0	UNITED STATES	2825.0
1	COMMONWEALTH OF INDEPENDENT STATES (FORMER USSR)	1535.0
2	PEOPLE'S REPUBLIC OF CHINA	436.0
3	JAPAN	188.0
4	UNITED KINGDOM	154.0

Before using xticks(rotation = “vertical”)



And the plot displaying top 5 Country/Organization who has the most number of Satellites In Space After using xticks(rotation = “vertical”) -



2) Activity -2 - Plot a bar graph for 20 Country/Organization who has the least number of Satellites In Space

```
#Q - Plot a bar graph for 20 Country/Organization who has the least number of Satellites In Space
import numpy as np
import pandas as pd
from matplotlib import pyplot as plt

dataframe = pd.read_csv('country_satellites.csv')
df = dataframe.dropna()

least_20 = df.tail(20)
print(least_20)

name = least_20['Country/Organization Name']
number = least_20['Satellites In Orbit']

plt.xlabel("Country/Organization Name")
plt.xticks(rotation='vertical')
plt.ylabel("Satellites In Orbit")

label = name
value = number
plt.bar(label, value,width=0.4, color=('red','blue','green','pink','yellow')) #bar-grap
```

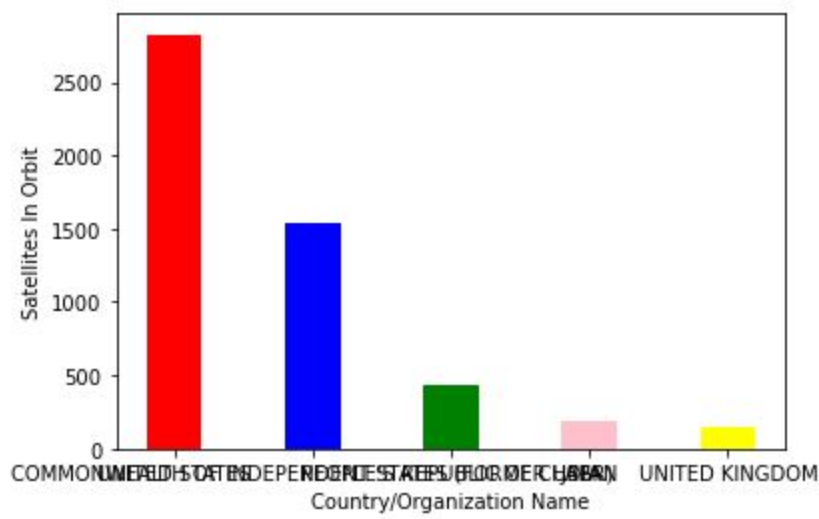
Output:

As we had printed the least\_20 variable which holds the last 20 rows of the dataset(table)

	Country/Organization Name	Satellites In Orbit
71	REPUBLIC OF SLOVENIA	2.0
72	SINGAPORE/TAIWAN	2.0
73	BANGLADESH	1.0
74	BOLIVIA	1.0
75	BULGARIA	1.0
76	DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA	1.0
77	FEDERAL DEMOCRATIC REPUBLIC OF NEPAL	1.0
78	IRAQ	1.0
79	LAOS	1.0
80	LATVIA	1.0
81	NEW ICO	1.0
82	NEW ZEALAND	1.0
83	QATAR	1.0
84	REPUBLIC OF RWANDA	1.0
85	SEA LAUNCH	1.0
86	SLOVAKIA	1.0
87	TURKMENISTAN/MONACO	1.0
88	UNITED STATES/BRAZIL	1.0
89	URUGUAY	1.0

Before using xticks(rotation = “vertical”) -





And the plot displaying 20 countries/organization who has the least number of Satellites In Space  
After using xticks(rotation = "vertical")

Out[5]: <BarContainer object of 19 artists>

