Forbes Billionaires - 2021

March 5, 2022

Forbes Billionaires 2021 Dataset Visualization

According to wikipedia, the World's Billionaires is an annual ranking by documented net worth of the wealthiest billionaires in the world, compiled and published in March annually by the American business magazine Forbes. The list was first published in March 1987. The total net worth of each individual on the list is estimated and is cited in United States dollars, based on their documented assets and accounting for debt and other factors. Royalty and dictators whose wealth comes from their positions are excluded from these lists. This ranking is an index of the wealthiest documented individuals, excluding any ranking of those with wealth that is not able to be completely ascertained.

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[1]:
```
import numpy as np  # linear algebra
import pandas as pd  # data processing, CSV file I/O (e.g. pd.read_csv)
import seaborn as sns
import matplotlib.pyplot as plt
import pycountry
import plotly.express as px
import plotly.graph_objs as go

import os
for dirname, _, filenames in os.walk('/kaggle/input'):
    for filename in filenames:
        print(os.path.join(dirname, filename))
```

1. Loading and Preparing Data

[2]:
```
data = pd.read_csv("Billionaire.csv")
data.head()
```

[2]:

	Name	NetWorth	Country	Source	Rank	Age	Industry
0	Jeff Bezos	$177 B	United States	Amazon	1	57.0	Technology
1	Elon Musk	$151 B	United States	Tesla, SpaceX	2	49.0	Automotive
2	Bernard Arnault & family	$150 B	France	LVMH	3	72.0	Fashion & Retail
3	Bill Gates	$124 B	United States	Microsoft	4	65.0	Technology
4	Mark Zuckerberg	$97 B	United States	Facebook	5	36.0	Technology

[3]:
```
data.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 2755 entries, 0 to 2754
Data columns (total 7 columns):
 #   Column    Non-Null Count  Dtype
---  ------    --------------  -----
 0   Name      2755 non-null   object
 1   NetWorth  2755 non-null   object
 2   Country   2755 non-null   object
 3   Source    2755 non-null   object
 4   Rank      2755 non-null   int64
 5   Age       2676 non-null   float64
 6   Industry  2755 non-null   object
dtypes: float64(1), int64(1), object(5)
memory usage: 150.8+ KB
```

[4]:
```
country_Billionaire_df = pd.DataFrame()

for country in data.Country.unique():
    df = data.groupby("Country").get_group(country)
    df2 = pd.DataFrame({"country": [country], "total_Billionaire": [len(df)]})
    country_Billionaire_df = country_Billionaire_df.append(df2,
                                                           ignore_index=True)

country_Billionaire_df = country_Billionaire_df.sort_values(
    "total_Billionaire", ascending=False)
data = country_Billionaire_df.set_index('country')
```

```
for country in data.index:
    code = [
        value.alpha_3 for value in pycountry.countries
        if (value.name == country)
    ]
    if len(code) == 0:
        data.at[country, "iso_alpha"] = None
        data.at[country, "Country Name"] = country
    else:
        data.at[country, "iso_alpha"] = code[0]
        data.at[country, "Country Name"] = country

data.head()
```

[4]:

country	total_Billionaire	iso_alpha	Country Name
United States	724	USA	United States
China	626	CHN	China
India	140	IND	India
Germany	136	DEU	Germany
Russia	118	None	Russia

[5]:
```
data.isnull().sum()
```

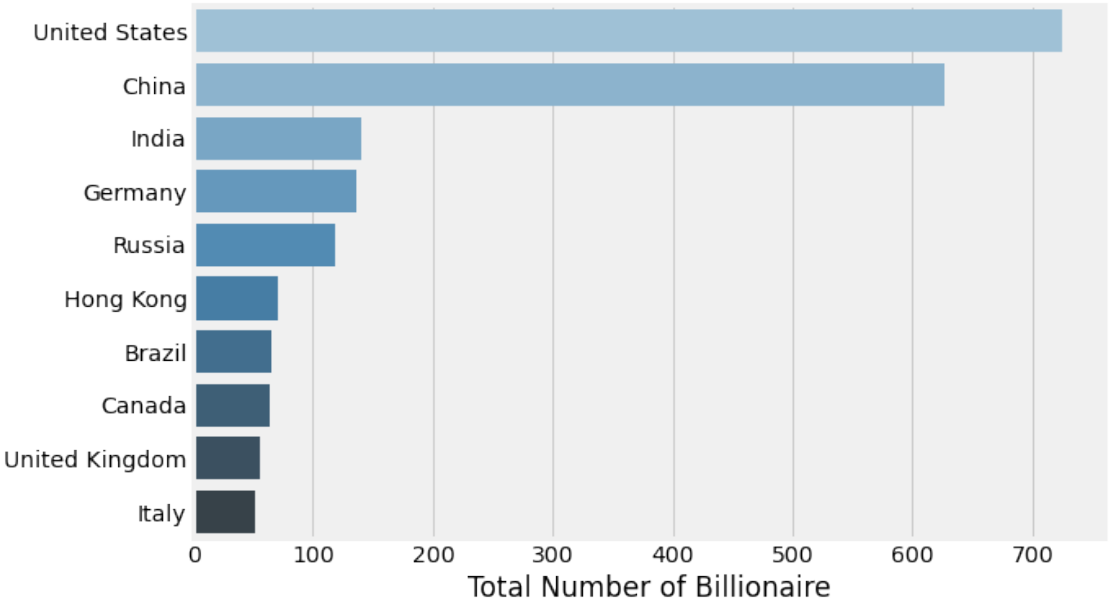
[5]:
```
total_Billionaire    0
iso_alpha            8
Country Name         0
dtype: int64
```

The iso_alpha code is missing for 8 countries.

2.0.1

2. Countries Having Most Billionaire

[6]:
```
plt.figure(figsize=(10, 6))
plt.style.use("fivethirtyeight")
sns.barplot(y="country",
            x="total_Billionaire",
            palette="Blues_d",
            data=country_Billionaire_df.iloc[:10])
plt.ylabel("")
plt.xlabel("Total Number of Billionaire")
plt.show()
```



United States have more than 700 Billioniares.

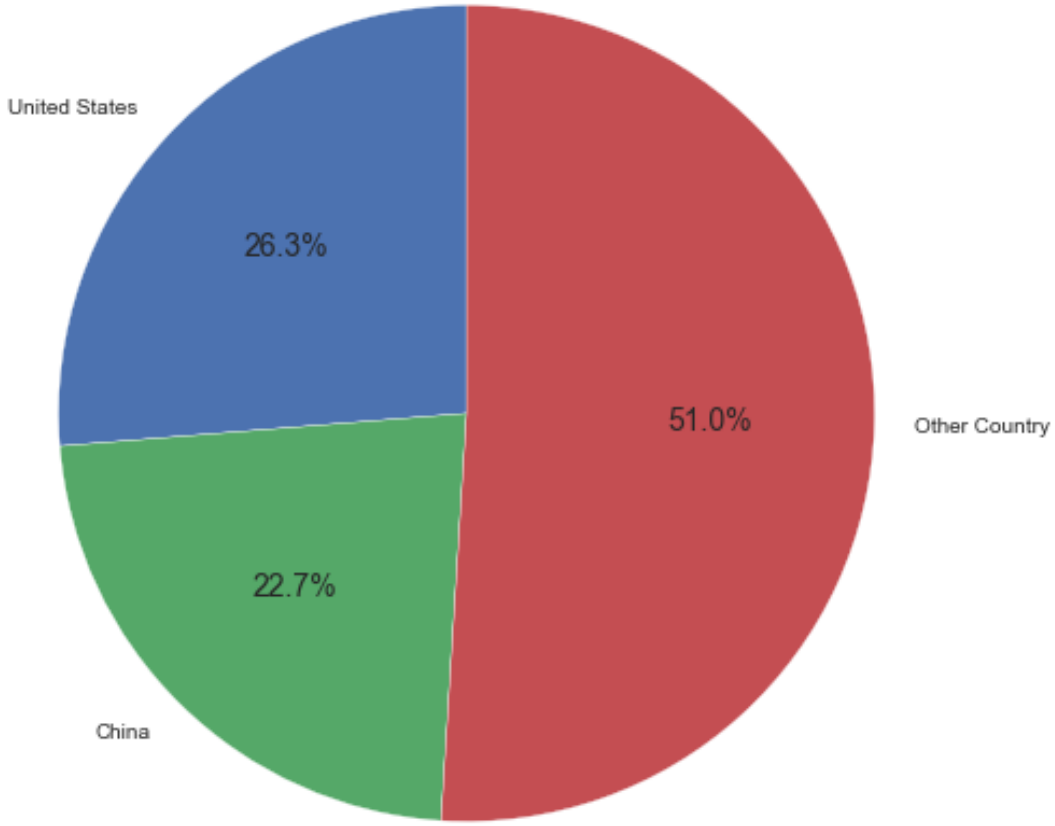
2.0.2

3.Billioniares From Top Two Country **VS** Rest of the World

[17]:
```
other = sum(country_Billionaire_df.total_Billionaire) - sum(
    country_Billionaire_df.iloc[:2].total_Billionaire)
number = list(country_Billionaire_df.iloc[:2].total_Billionaire)
number.append(other)

country = list(country_Billionaire_df.iloc[:2].country)
country.append("Other Country")

plt.figure(figsize=(10, 7))
plt.style.use("seaborn-deep")
plt.pie(number,
        labels=country,
        shadow=False,
        startangle=90,
        autopct='%1.1f%%',
        wedgeprops={'edgecolor': 'white'})
plt.tight_layout()
```



49% Billioniare are from top two country United Stetes and China.

2.0.3

4. Continent Based Billionaires List

[8]:
```
def plot_Billionaire_Data(continent="world", title=""):
    fig = px.choropleth(
        data,
        locations="iso_alpha",
        color="total_Billionaire",
        hover_name="Country Name",  # column to add to hover information
        color_continuous_scale="Viridis",
        color_continuous_midpoint=300,
        scope=str(continent))
```

```
    layout = go.Layout(title=go.layout.Title(text=f"<b>{title}</b>", x=0.5),
                       showlegend=False,
                       font=dict(size=14),
                       width=750,
                       height=350,
                       margin=dict(l=0, r=0, b=0, t=30))

    fig.update_layout(layout)
    fig.show()
```

[9]:
```
plot_Billionaire_Data(continent="asia", title="Asian Billionaires List")
```

[10]:
```
plot_Billionaire_Data(continent="europe", title="European Billionaires List")
```

[11]:
```
plot_Billionaire_Data(continent="africa", title="African Billionaires List")
```

[12]:
```
plot_Billionaire_Data(continent="north america",
                      title="North American Billionaires List")
```

[13]:
```
plot_Billionaire_Data(continent="south america",
                      title="South American Billionaires List")
```

2.0.4

5. World Map by Forbes Billionaires List

[14]:
```
plot_Billionaire_Data(continent="world", title="Worldwide Billionaires")
```