

01

Task-01



Create a bar chart or histogram to visualize the distribution of a categorical or continuous variable, such as the distribution of ages or genders in a population.

Sample Dataset :-

<https://data.worldbank.org/indicator/SP.POP.TOTL>

PRODIGY INFOTECH

```
import pandas as pd
import numpy as np
import seaborn as sns
import matplotlib.pyplot as plt
import plotly.express as px
```

```
da= pd.read_csv("/content/drive/MyDrive/DATA_sets/world_population.csv")
```

```
da.head()
```

	Rank	CCA3	Country	Capital	Continent	2022 Population	2020 Population	2015 Population	2010 Population	2000 Population	1990 Population	1980 Population	Po
0	36	AFG	Afghanistan	Kabul	Asia	41128771.0	38972230.0	33753499.0	28189672.0	19542982.0	10694796.0	12486631.0	10
1	138	ALB	Albania	Tirana	Europe	2842321.0	2866849.0	2882481.0	2913399.0	3182021.0	3295066.0	2941651.0	2
2	34	DZA	Algeria	Algiers	Africa	44903225.0	43451666.0	39543154.0	35856344.0	30774621.0	25518074.0	18739378.0	13
3	213	ASM	American Samoa	Pago Pago	Oceania	44273.0	46189.0	51368.0	54849.0	58230.0	47818.0	32886.0	
4	203	AND	Andorra	Andorra la Vella	Europe	79824.0	77700.0	71746.0	71519.0	66097.0	53569.0	35611.0	

```
da.shape
```

```
(234, 17)
```

```
da.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 234 entries, 0 to 233
Data columns (total 17 columns):
#   Column                                Non-Null Count  Dtype
---  -
0   Rank                                  234 non-null    int64
1   CCA3                                  234 non-null    object
2   Country                              234 non-null    object
3   Capital                              234 non-null    object
4   Continent                             234 non-null    object
5   2022 Population                       230 non-null    float64
6   2020 Population                       233 non-null    float64
7   2015 Population                       230 non-null    float64
8   2010 Population                       227 non-null    float64
9   2000 Population                       227 non-null    float64
10  1990 Population                       229 non-null    float64
```

```
11 1980 Population      229 non-null    float64
12 1970 Population      230 non-null    float64
13 Area (km²)           232 non-null    float64
14 Density (per km²)     230 non-null    float64
15 Growth Rate           232 non-null    float64
16 World Population Percentage 234 non-null    float64
dtypes: float64(12), int64(1), object(4)
memory usage: 31.2+ KB
```

da.columns

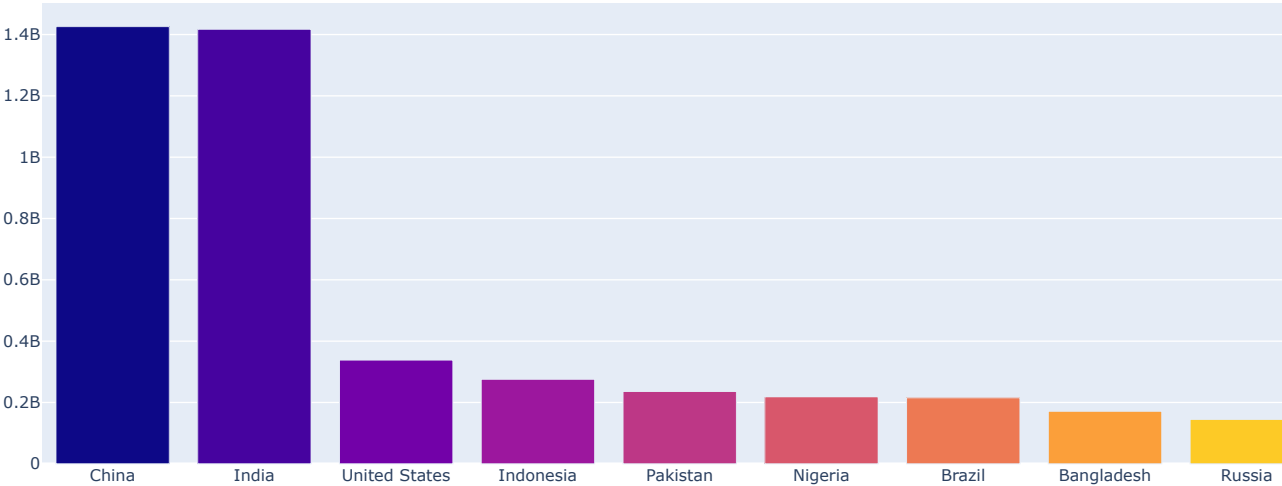
```
Index(['Rank', 'CCA3', 'Country', 'Capital', 'Continent', '2022 Population',
      '2020 Population', '2015 Population', '2010 Population',
      '2000 Population', '1990 Population', '1980 Population',
      '1970 Population', 'Area (km²)', 'Density (per km²)', 'Growth Rate',
      'World Population Percentage'],
      dtype='object')
```

top_ten = da.sort_values(by="2022 Population",ascending =False).head(10)

top_ten

	Rank	CCA3	Country	Capital	Continent	2022 Population	2020 Population	2015 Population	2010 Population	2000 Population	1990 Population
41	1	CHN	China	Beijing	Asia	1.425887e+09	1.424930e+09	1.393715e+09	1.348191e+09	1.264099e+09	1.153704e+09
92	2	IND	India	New Delhi	Asia	1.417173e+09	1.396387e+09	1.322867e+09	1.240614e+09	1.059634e+09	NaN
221	3	USA	United States	Washington, D.C.	North America	3.382899e+08	3.359420e+08	3.246078e+08	3.111828e+08	2.823986e+08	2.480837e+08
93	4	IDN	Indonesia	Jakarta	Asia	2.755013e+08	2.718580e+08	2.590920e+08	2.440162e+08	2.140724e+08	1.821599e+08
156	5	PAK	Pakistan	Islamabad	Asia	2.358249e+08	2.271967e+08	2.109693e+08	1.944545e+08	1.543699e+08	1.154141e+08
149	6	NGA	Nigeria	Abuja	Africa	2.185412e+08	2.083274e+08	1.839958e+08	1.609529e+08	1.228520e+08	9.521426e+07
27	7	BRA	Brazil	Brasilia	South America	2.153135e+08	2.131963e+08	2.051882e+08	1.963535e+08	1.758737e+08	1.507064e+08
16	8	BGD	Bangladesh	Dhaka	Asia	1.711864e+08	1.674210e+08	1.578300e+08	1.483911e+08	1.291933e+08	1.071477e+08
171	9	RUS	Russia	Moscow	Europe	1.447133e+08	1.456173e+08	1.446684e+08	1.432426e+08	1.468448e+08	1.480057e+08
131	10	MEX	Mexico	Mexico City	North America	1.275041e+08	1.259983e+08	1.201499e+08	1.125324e+08	9.787344e+07	8.172043e+07

```
top_fig = px.bar(top_ten,x="Country",y="2022 Population",color="Rank",title="Top Ten Countries by Population in 2022",hover_data= top_t
top_fig.show()
```

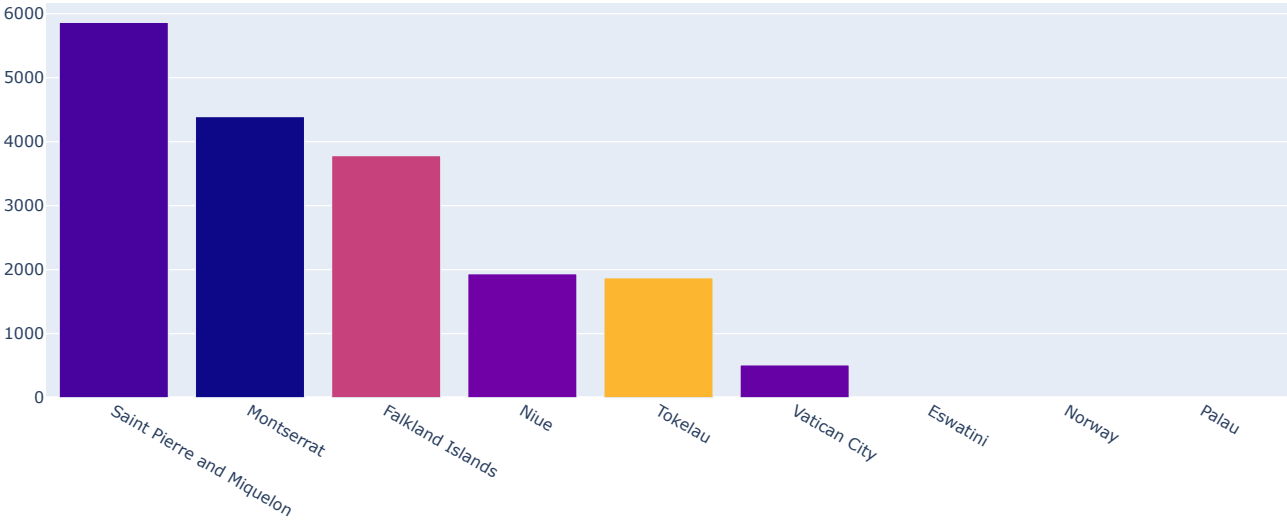


```
bottom_ten = da.sort_values(by="2022 Population",ascending=False).tail(10)
```

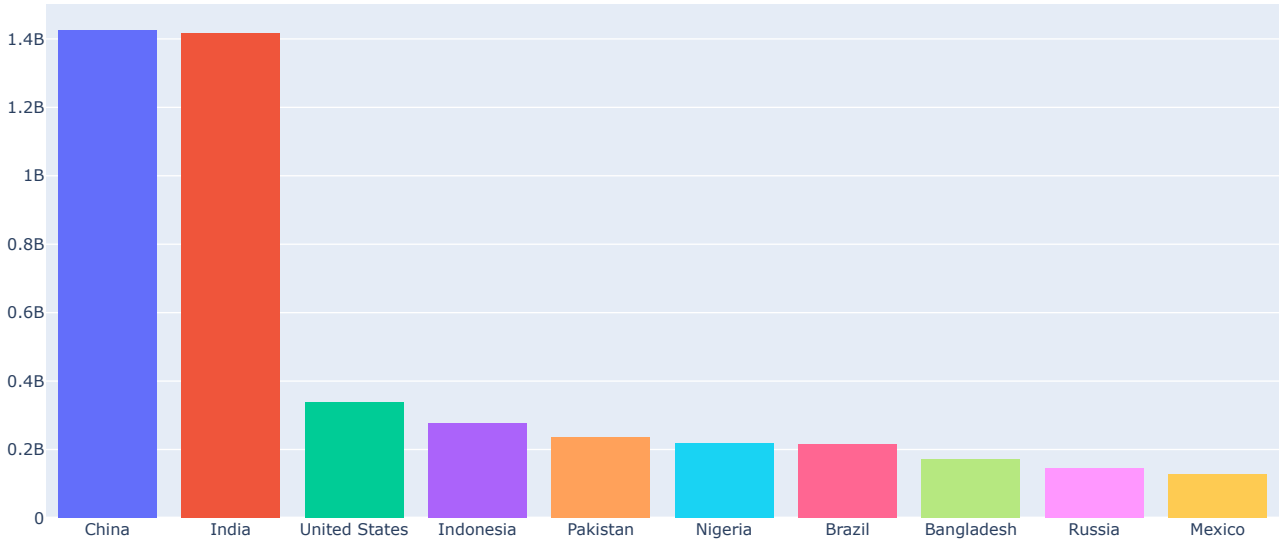
bottom_ten

	Rank	CCA3	Country	Capital	Continent	2022 Population	2020 Population	2015 Population	2010 Population	2000 Population	1990 Population	1980 Population
177	229	SPM	Saint Pierre and Miquelon	Saint-Pierre	North America	5862.0	5906.0	5978.0	6052.0	6274.0	6324.0	6106.0
137	230	MSR	Montserrat	Brades	North America	4390.0	4500.0	5059.0	4938.0	5138.0	10805.0	11452.0
64	231	FLK	Falkland Islands	Stanley	South America	3780.0	3747.0	3408.0	3187.0	3080.0	2332.0	2240.0
150	232	NIU	Niue	Alofi	Oceania	1934.0	1942.0	1847.0	1812.0	2074.0	2533.0	3637.0
209	233	TKL	Tokelau	Nukunonu	Oceania	1871.0	1827.0	1454.0	1367.0	1666.0	1669.0	1647.0
226	234	VAT	Vatican City	Vatican City	Europe	510.0	520.0	564.0	596.0	651.0	700.0	733.0
62	159	SWZ	Eswatini	Mbabane	Africa	NaN	1180655.0	1133936.0	1099920.0	1030496.0	854011.0	598564.0
154	120	NOR	Norway	Oslo	Europe	NaN	5379839.0	NaN	4889741.0	4491202.0	4241636.0	4085776.0
157	222	PLW	Palau	Ngerulmud	Oceania	NaN	17972.0	17794.0	18540.0	19726.0	15293.0	12252.0
207	155	TLS	Timor-Leste	Dili	Asia	NaN	1299995.0	1205813.0	1088486.0	NaN	758106.0	642224.0

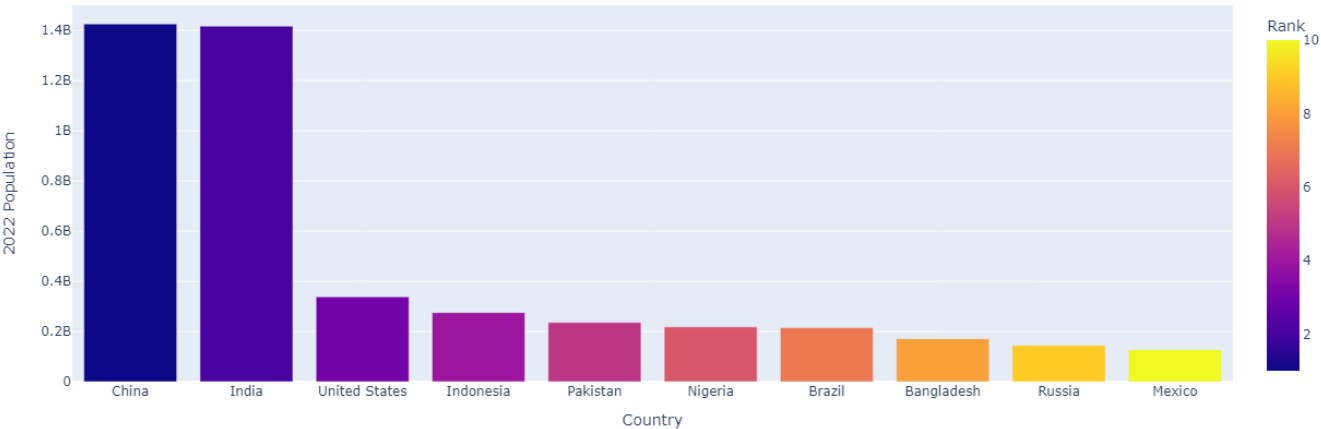
```
bottom_fig = px.bar(bottom_ten,x="Country",y="2022 Population",color="Growth Rate",title="Top Ten Countries by Population in 2022",hover)
bottom_fig.show()
```



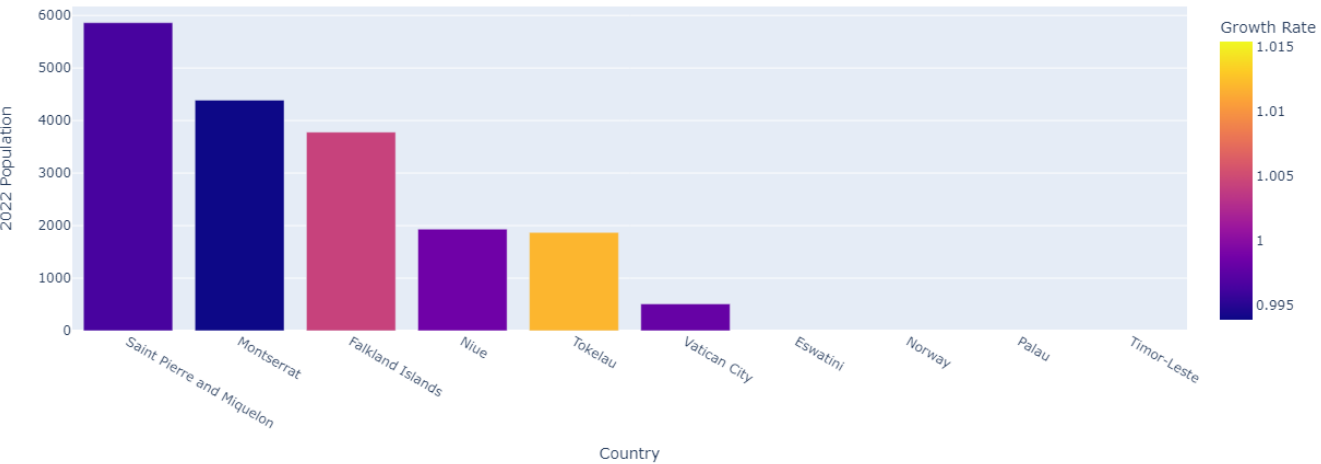
```
px.histogram(top_ten,y="2022 Population",x="Country",color="World Population Percentage")
```

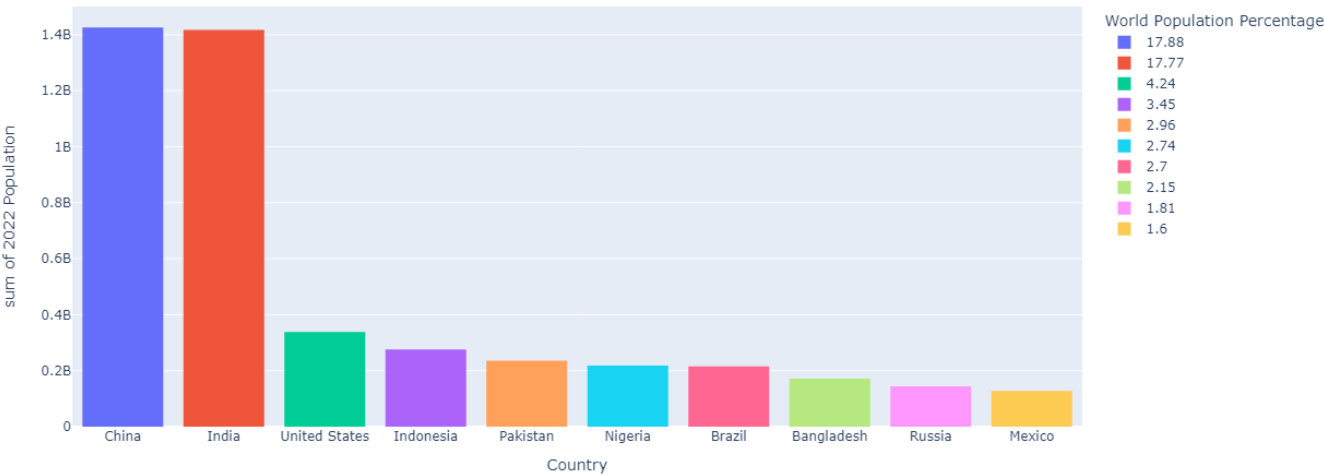


Top Ten Countries by Population in 2022



Top Ten Countries by Population in 2022





Double-click (or enter) to edit