```python
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns

df = pd.read_csv(r'C:\\Users\\Leander Chris\\OneDrive\\Desktop\\
PRODIGY_DS_01\\API_SP.POP.TOTL_DS2_en_csv_v2_21117.csv')

print(df)
```

```
                   Country Name Country Code      Indicator Name  \
0                         Aruba          ABW  Population, total
1     Africa Eastern and Southern        AFE  Population, total
2                   Afghanistan          AFG  Population, total
3     Africa Western and Central        AFW  Population, total
4                        Angola          AGO  Population, total
..                          ...          ...                 ...
261                      Kosovo          XKX  Population, total
262                 Yemen, Rep.          YEM  Population, total
263                South Africa          ZAF  Population, total
264                      Zambia          ZMB  Population, total
265                    Zimbabwe          ZWE  Population, total

    Indicator Code         1960         1961         1962         1963
\
0      SP.POP.TOTL      54608.0      55811.0      56682.0      57475.0

1      SP.POP.TOTL  130692579.0  134169237.0  137835590.0  141630546.0

2      SP.POP.TOTL    8622466.0    8790140.0    8969047.0    9157465.0

3      SP.POP.TOTL   97256290.0   99314028.0  101445032.0  103667517.0

4      SP.POP.TOTL    5357195.0    5441333.0    5521400.0    5599827.0

..             ...          ...          ...          ...          ...

261    SP.POP.TOTL     947000.0     966000.0     994000.0    1022000.0

262    SP.POP.TOTL    5542459.0    5646668.0    5753386.0    5860197.0

263    SP.POP.TOTL   16520441.0   16989464.0   17503133.0   18042215.0

264    SP.POP.TOTL    3119430.0    3219451.0    3323427.0    3431381.0

265    SP.POP.TOTL    3806310.0    3925952.0    4049778.0    4177931.0

            1964         1965  ...         2013         2014
2015  \
0        58178.0      58782.0  ...     102880.0     103594.0
```

```
104257.0
1     145605995.0   149742351.0   ...   567892149.0   583651101.0
600008424.0
2       9355514.0     9565147.0   ...    31541209.0    32716210.0
33753499.0
3     105959979.0   108336203.0   ...   387204553.0   397855507.0
408690375.0
4       5673199.0     5736582.0   ...    26147002.0    27128337.0
28127721.0
..            ...           ...   ...           ...           ...
...
261     1050000.0     1078000.0   ...     1818117.0     1812771.0
1788196.0
262     5973803.0     6097298.0   ...    26984002.0    27753304.0
28516545.0
263    18603097.0    19187194.0   ...    53873616.0    54729551.0
55876504.0
264     3542764.0     3658024.0   ...    15234976.0    15737793.0
16248230.0
265     4310332.0     4447149.0   ...    13555422.0    13855753.0
14154937.0

            2016          2017          2018          2019
2020   \
0         104874.0      105439.0      105962.0      106442.0      106585.0

1      616377605.0   632746570.0   649757148.0   667242986.0   685112979.0

2       34636207.0    35643418.0    36686784.0    37769499.0    38972230.0

3      419778384.0   431138704.0   442646825.0   454306063.0   466189102.0

4       29154746.0    30208628.0    31273533.0    32353588.0    33428486.0

..            ...           ...           ...           ...           ...

261      1777557.0     1791003.0     1797085.0     1788878.0     1790133.0

262     29274002.0    30034389.0    30790513.0    31546691.0    32284046.0

263     56422274.0    56641209.0    57339635.0    58087055.0    58801927.0

264     16767761.0    17298054.0    17835893.0    18380477.0    18927715.0

265     14452704.0    14751101.0    15052184.0    15354608.0    15669666.0

            2021          2022
0         106537.0      106445.0
1      702977106.0   720839314.0
```

```
2      40099462.0    41128771.0
3     478185907.0   490330870.0
4      34503774.0    35588987.0
..            ...           ...
261     1786038.0     1761985.0
262    32981641.0    33696614.0
263    59392255.0    59893885.0
264    19473125.0    20017675.0
265    15993524.0    16320537.0

[266 rows x 67 columns]

df.head()

              Country Name Country Code      Indicator Name
Indicator Code  \
0                     Aruba          ABW  Population, total
SP.POP.TOTL
1  Africa Eastern and Southern          AFE  Population, total
SP.POP.TOTL
2               Afghanistan          AFG  Population, total
SP.POP.TOTL
3    Africa Western and Central          AFW  Population, total
SP.POP.TOTL
4                    Angola          AGO  Population, total
SP.POP.TOTL

            1960          1961          1962          1963          1964  \
0        54608.0       55811.0       56682.0       57475.0       58178.0
1    130692579.0   134169237.0   137835590.0   141630546.0   145605995.0
2      8622466.0     8790140.0     8969047.0     9157465.0     9355514.0
3     97256290.0    99314028.0   101445032.0   103667517.0   105959979.0
4      5357195.0     5441333.0     5521400.0     5599827.0     5673199.0

            1965  ...          2013          2014          2015
2016  \
0        58782.0  ...      102880.0      103594.0      104257.0
104874.0
1    149742351.0  ...   567892149.0   583651101.0   600008424.0
616377605.0
2      9565147.0  ...    31541209.0    32716210.0    33753499.0
34636207.0
3    108336203.0  ...   387204553.0   397855507.0   408690375.0
419778384.0
4      5736582.0  ...    26147002.0    27128337.0    28127721.0
29154746.0

            2017          2018          2019          2020          2021  \
0       105439.0      105962.0      106442.0      106585.0      106537.0
1    632746570.0   649757148.0   667242986.0   685112979.0   702977106.0
```

```
2    35643418.0    36686784.0    37769499.0    38972230.0    40099462.0
3   431138704.0   442646825.0   454306063.0   466189102.0   478185907.0
4    30208628.0    31273533.0    32353588.0    33428486.0    34503774.0

          2022
0     106445.0
1  720839314.0
2   41128771.0
3  490330870.0
4   35588987.0

[5 rows x 67 columns]

df.tail()

      Country Name Country Code       Indicator Name Indicator Code
1960  \
261        Kosovo          XKX  Population, total     SP.POP.TOTL
947000.0
262   Yemen, Rep.          YEM  Population, total     SP.POP.TOTL
5542459.0
263  South Africa          ZAF  Population, total     SP.POP.TOTL
16520441.0
264        Zambia          ZMB  Population, total     SP.POP.TOTL
3119430.0
265      Zimbabwe          ZWE  Population, total     SP.POP.TOTL
3806310.0

            1961         1962         1963         1964
1965  ...  \
261    966000.0     994000.0    1022000.0    1050000.0    1078000.0  ...

262   5646668.0    5753386.0    5860197.0    5973803.0    6097298.0  ...

263  16989464.0   17503133.0   18042215.0   18603097.0   19187194.0  ...

264   3219451.0    3323427.0    3431381.0    3542764.0    3658024.0  ...

265   3925952.0    4049778.0    4177931.0    4310332.0    4447149.0  ...

            2013         2014         2015         2016         2017
2018  \
261   1818117.0    1812771.0    1788196.0    1777557.0    1791003.0
1797085.0
262  26984002.0   27753304.0   28516545.0   29274002.0   30034389.0
30790513.0
263  53873616.0   54729551.0   55876504.0   56422274.0   56641209.0
57339635.0
264  15234976.0   15737793.0   16248230.0   16767761.0   17298054.0
17835893.0
```

```
265   13555422.0   13855753.0   14154937.0   14452704.0   14751101.0
15052184.0

                 2019         2020         2021         2022
261    1788878.0    1790133.0    1786038.0    1761985.0
262   31546691.0   32284046.0   32981641.0   33696614.0
263   58087055.0   58801927.0   59392255.0   59893885.0
264   18380477.0   18927715.0   19473125.0   20017675.0
265   15354608.0   15669666.0   15993524.0   16320537.0

[5 rows x 67 columns]
```

df.shape

```
(266, 67)
```

df.columns

```
Index(['Country Name', 'Country Code', 'Indicator Name', 'Indicator
Code',
       '1960', '1961', '1962', '1963', '1964', '1965', '1966', '1967',
'1968',
       '1969', '1970', '1971', '1972', '1973', '1974', '1975', '1976',
'1977',
       '1978', '1979', '1980', '1981', '1982', '1983', '1984', '1985',
'1986',
       '1987', '1988', '1989', '1990', '1991', '1992', '1993', '1994',
'1995',
       '1996', '1997', '1998', '1999', '2000', '2001', '2002', '2003',
'2004',
       '2005', '2006', '2007', '2008', '2009', '2010', '2011', '2012',
'2013',
       '2014', '2015', '2016', '2017', '2018', '2019', '2020', '2021',
'2022'],
      dtype='object')
```

df.dtypes

```
Country Name       object
Country Code       object
Indicator Name     object
Indicator Code     object
1960               float64
                    ...
2018               float64
2019               float64
2020               float64
2021               float64
2022               float64
Length: 67, dtype: object
```

```
df.info()

<class 'pandas.core.frame.DataFrame'>
RangeIndex: 266 entries, 0 to 265
Data columns (total 67 columns):
 #   Column          Non-Null Count  Dtype
---  ------          --------------  -----
 0   Country Name    266 non-null    object
 1   Country Code    266 non-null    object
 2   Indicator Name  266 non-null    object
 3   Indicator Code  266 non-null    object
 4   1960            264 non-null    float64
 5   1961            264 non-null    float64
 6   1962            264 non-null    float64
 7   1963            264 non-null    float64
 8   1964            264 non-null    float64
 9   1965            264 non-null    float64
 10  1966            264 non-null    float64
 11  1967            264 non-null    float64
 12  1968            264 non-null    float64
 13  1969            264 non-null    float64
 14  1970            264 non-null    float64
 15  1971            264 non-null    float64
 16  1972            264 non-null    float64
 17  1973            264 non-null    float64
 18  1974            264 non-null    float64
 19  1975            264 non-null    float64
 20  1976            264 non-null    float64
 21  1977            264 non-null    float64
 22  1978            264 non-null    float64
 23  1979            264 non-null    float64
 24  1980            264 non-null    float64
 25  1981            264 non-null    float64
 26  1982            264 non-null    float64
 27  1983            264 non-null    float64
 28  1984            264 non-null    float64
 29  1985            264 non-null    float64
 30  1986            264 non-null    float64
 31  1987            264 non-null    float64
 32  1988            264 non-null    float64
 33  1989            264 non-null    float64
 34  1990            265 non-null    float64
 35  1991            265 non-null    float64
 36  1992            265 non-null    float64
 37  1993            265 non-null    float64
 38  1994            265 non-null    float64
 39  1995            265 non-null    float64
 40  1996            265 non-null    float64
 41  1997            265 non-null    float64
 42  1998            265 non-null    float64
```

```
43   1999              265 non-null    float64
44   2000              265 non-null    float64
45   2001              265 non-null    float64
46   2002              265 non-null    float64
47   2003              265 non-null    float64
48   2004              265 non-null    float64
49   2005              265 non-null    float64
50   2006              265 non-null    float64
51   2007              265 non-null    float64
52   2008              265 non-null    float64
53   2009              265 non-null    float64
54   2010              265 non-null    float64
55   2011              265 non-null    float64
56   2012              265 non-null    float64
57   2013              265 non-null    float64
58   2014              265 non-null    float64
59   2015              265 non-null    float64
60   2016              265 non-null    float64
61   2017              265 non-null    float64
62   2018              265 non-null    float64
63   2019              265 non-null    float64
64   2020              265 non-null    float64
65   2021              265 non-null    float64
66   2022              265 non-null    float64
dtypes: float64(63),  object(4)
memory usage: 139.4+ KB

df.describe()

                1960            1961            1962            1963
1964  \
count   2.640000e+02   2.640000e+02   2.640000e+02   2.640000e+02
2.640000e+02
mean    1.172712e+08   1.188807e+08   1.210511e+08   1.237333e+08
1.264378e+08
std     3.695439e+08   3.740897e+08   3.808061e+08   3.895039e+08
3.982439e+08
min     2.646000e+03   2.888000e+03   3.171000e+03   3.481000e+03
3.811000e+03
25%     5.132212e+05   5.231345e+05   5.337595e+05   5.449288e+05
5.566630e+05
50%     3.757486e+06   3.887144e+06   4.023896e+06   4.139356e+06
4.224612e+06
75%     2.670606e+07   2.748694e+07   2.830289e+07   2.914708e+07
3.001684e+07
max     3.031474e+09   3.072422e+09   3.126850e+09   3.193429e+09
3.260442e+09

                1965            1966            1967            1968
1969  \
```

```
count   2.640000e+02   2.640000e+02   2.640000e+02   2.640000e+02
2.640000e+02
mean    1.291813e+08   1.320404e+08   1.348980e+08   1.378358e+08
1.408789e+08
std     4.071153e+08   4.164504e+08   4.257424e+08   4.353218e+08
4.452927e+08
min     4.161000e+03   4.531000e+03   4.930000e+03   5.354000e+03
5.646000e+03
25%     5.651150e+05   5.691470e+05   5.773872e+05   5.832700e+05
5.875942e+05
50%     4.277636e+06   4.331825e+06   4.385700e+06   4.450934e+06
4.530800e+06
75%     3.084892e+07   3.163010e+07   3.209247e+07   3.249927e+07
3.277149e+07
max     3.328209e+09   3.398480e+09   3.468371e+09   3.540164e+09
3.614573e+09

            ...           2013           2014           2015           2016  \
count   ...   2.650000e+02   2.650000e+02   2.650000e+02   2.650000e+02
mean    ...   2.927787e+08   2.966774e+08   3.005462e+08   3.044051e+08
std     ...   9.186849e+08   9.301446e+08   9.414558e+08   9.526720e+08
min     ...   1.069400e+04   1.089900e+04   1.087700e+04   1.085200e+04
25%     ...   1.697753e+06   1.743309e+06   1.788196e+06   1.777557e+06
50%     ...   1.014958e+07   1.028212e+07   1.035808e+07   1.032545e+07
75%     ...   6.023395e+07   6.078914e+07   6.073058e+07   6.062750e+07
max     ...   7.229732e+09   7.317970e+09   7.405278e+09   7.492157e+09

                2017           2018           2019           2020
2021  \
count   2.650000e+02   2.650000e+02   2.650000e+02   2.650000e+02
2.650000e+02
mean    3.082575e+08   3.120276e+08   3.157110e+08   3.192936e+08
3.225180e+08
std     9.638572e+08   9.746880e+08   9.851690e+08   9.952294e+08
1.004211e+09
min     1.082800e+04   1.086500e+04   1.095600e+04   1.106900e+04
1.120400e+04
25%     1.791003e+06   1.797085e+06   1.788878e+06   1.790133e+06
1.786038e+06
50%     1.030030e+07   1.039533e+07   1.044767e+07   1.060623e+07
1.050577e+07
75%     6.053671e+07   6.042176e+07   5.987258e+07   6.170452e+07
6.358833e+07
max     7.578221e+09   7.661777e+09   7.742682e+09   7.820964e+09
7.888161e+09

                2022
count   2.650000e+02
mean    3.254839e+08
std     1.012174e+09
```

```
min      1.131200e+04
25%      1.761985e+06
50%      1.052607e+07
75%      6.549775e+07
max      7.951150e+09

[8 rows x 63 columns]
```