

Assignment 01_Completed

July 19, 2020

1 Assignment 01: Evaluate the GDP Dataset

The comments/sections provided are your cues to perform the assignment. You don't need to limit yourself to the number of rows/cells provided. You can add additional rows in each section to add more lines of code.

If at any point in time you need help on solving this assignment, view our demo video to understand the different steps of the code.

Happy coding!

1: View and add the dataset

```
[4]: #Import required library
import numpy as np
```

```
[5]: #Manually add the dataset
countries = np.
    ↳array(['Algeria', 'Angola', 'Argentina', 'Australia', 'Austria', 'Bahamas', 'Bangladesh', 'Belarus',
    ↳Salvador', 'Estonia', 'Ethiopia', 'Fiji', 'Finland', 'France', 'Georgia', 'Ghana', 'Grenada', 'Guinea',
    ↳South Korea', 'Liberia', 'Malaysia', 'Mexico', 'Morocco', 'Nepal', 'New Zealand', 'Norway', 'Pakistan',
    ↳Peru', 'Qatar', 'Russia', 'Singapore', 'South Africa', 'Spain', 'Sweden', 'Switzerland', 'Thailand',
    ↳United Arab Emirates', 'United Kingdom', 'United States', 'Uruguay', 'Venezuela', 'Vietnam', 'Zimbabwe'])
gdp_countries = np.array([2255.225482, 629.9553062, 11601.63022, 25306.82494, 27266.40335, 19466.99052,
    ↳588.3691778, 2890.345675, 24733.62696, 1445.760002, 4803.398244, 2618.876037, 590.4521124,
    ↳665.7982328, 7122.938458, 2639.54156, 3362.4656, 15378.16704, 30860.12808, 2579.115607, 6525.541272, 229.6769525,
    ↳2242.689259, 27570.4852, 23016.84778, 1334.646773, 402.6953275, 6047.200797, 394.1156638, 385.5793827,
    ↳1414.072488, 5745.981529, 837.7464011, 1206.991065, 27715.52837, 18937.24998, 39578.07441, 478.2194906,
    ↳16684.21278, 279.2204061, 5345.213415, 6288.25324, 1908.304416, 274.8728621, 14646.42094, 40034.85063, 672.1547506,
    ↳3359.517402, 36152.66676, 3054.727742, 33529.83052, 3825.093781, 15428.32098, 33630.24604, 39170.41371,
    ↳2699.123242, 21058.43643, 28272.40661, 37691.02733, 9581.05659, 5671.912202, 757.4009286, 347.7456605])
```

2: Find and print the name of the country with the highest GDP

```
[7]: #Use the argmax() method to find the highest GDP  
countries_with_max_gdp = countries[gdp_countries.argmax()]
```

```
[7]: 'Norway'
```

```
[8]: #Print the name of the country  
countries_with_max_gdp
```

```
[8]: 'Norway'
```

3: Find and print the name of the country with the lowest GDP

```
[9]: #Use the argmin() method to find the lowest GDP  
country_with_lowest_gdp = countries[gdp_countries.argmin()]
```

```
[11]: #Print the name of the country  
country_with_lowest_gdp
```

```
[11]: 'Ethiopia'
```

4: Print out text ('evaluating country') and input value ('country name') iteratively

```
[18]: #Use a for loop to print the required output  
for country in countries:  
    print('evaluating country : ' + country)
```

```
evaluating country : Algeria  
evaluating country : Angola  
evaluating country : Argentina  
evaluating country : Australia  
evaluating country : Austria  
evaluating country : Bahamas  
evaluating country : Bangladesh  
evaluating country : Belarus  
evaluating country : Belgium  
evaluating country : Bhutan  
evaluating country : Brazil  
evaluating country : Bulgaria  
evaluating country : Cambodia  
evaluating country : Cameroon  
evaluating country : Chile  
evaluating country : China  
evaluating country : Colombia  
evaluating country : Cyprus  
evaluating country : Denmark  
evaluating country : El Salvador
```

evaulating country : Estonia
evaulating country : Ethiopia
evaulating country : Fiji
evaulating country : Finland
evaulating country : France
evaulating country : Georgia
evaulating country : Ghana
evaulating country : Grenada
evaulating country : Guinea
evaulating country : Haiti
evaulating country : Honduras
evaulating country : Hungary
evaulating country : India
evaulating country : Indonesia
evaulating country : Ireland
evaulating country : Italy
evaulating country : Japan
evaulating country : Kenya
evaulating country : South Korea
evaulating country : Liberia
evaulating country : Malaysia
evaulating country : Mexico
evaulating country : Morocco
evaulating country : Nepal
evaulating country : New Zealand
evaulating country : Norway
evaulating country : Pakistan
evaulating country : Peru
evaulating country : Qatar
evaulating country : Russia
evaulating country : Singapore
evaulating country : South Africa
evaulating country : Spain
evaulating country : Sweden
evaulating country : Switzerland
evaulating country : Thailand
evaulating country : United Arab Emirates
evaulating country : United Kingdom
evaulating country : United States
evaulating country : Uruguay
evaulating country : Venezuela
evaulating country : Vietnam
evaulating country : Zimbabwe

5: Print out the entire list of the countries with their GDPs

```
[26]: #Use a for loop to print the required list
      for i in range(len(countries)):
          country = countries[i]
          gdp = gdp_countries[i]
          print('Country - {}, GDP - {}'.format( country , gdp))
```

```
Country - Algeria, GDP - 2255.225482
Country - Angola, GDP - 629.9553062
Country - Argentina, GDP - 11601.63022
Country - Australia, GDP - 25306.82494
Country - Austria, GDP - 27266.40335
Country - Bahamas, GDP - 19466.99052
Country - Bangladesh, GDP - 588.3691778
Country - Belarus, GDP - 2890.345675
Country - Belgium, GDP - 24733.62696
Country - Bhutan, GDP - 1445.760002
Country - Brazil, GDP - 4803.398244
Country - Bulgaria, GDP - 2618.876037
Country - Cambodia, GDP - 590.4521124
Country - Cameroon, GDP - 665.7982328
Country - Chile, GDP - 7122.938458
Country - China, GDP - 2639.54156
Country - Colombia, GDP - 3362.4656
Country - Cyprus, GDP - 15378.16704
Country - Denmark, GDP - 30860.12808
Country - El Salvador, GDP - 2579.115607
Country - Estonia, GDP - 6525.541272
Country - Ethiopia, GDP - 229.6769525
Country - Fiji, GDP - 2242.689259
Country - Finland, GDP - 27570.4852
Country - France, GDP - 23016.84778
Country - Georgia, GDP - 1334.646773
Country - Ghana, GDP - 402.6953275
Country - Grenada, GDP - 6047.200797
Country - Guinea, GDP - 394.1156638
Country - Haiti, GDP - 385.5793827
Country - Honduras, GDP - 1414.072488
Country - Hungary, GDP - 5745.981529
Country - India, GDP - 837.7464011
Country - Indonesia, GDP - 1206.991065
Country - Ireland, GDP - 27715.52837
Country - Italy, GDP - 18937.24998
Country - Japan, GDP - 39578.07441
Country - Kenya, GDP - 478.2194906
Country - South Korea, GDP - 16684.21278
Country - Liberia, GDP - 279.2204061
Country - Malaysia, GDP - 5345.213415
```

```

Country - Mexico, GDP - 6288.25324
Country - Morocco, GDP - 1908.304416
Country - Nepal, GDP - 274.8728621
Country - New Zealand, GDP - 14646.42094
Country - Norway, GDP - 40034.85063
Country - Pakistan, GDP - 672.1547506
Country - Peru, GDP - 3359.517402
Country - Qatar, GDP - 36152.66676
Country - Russia, GDP - 3054.727742
Country - Singapore, GDP - 33529.83052
Country - South Africa, GDP - 3825.093781
Country - Spain, GDP - 15428.32098
Country - Sweden, GDP - 33630.24604
Country - Switzerland, GDP - 39170.41371
Country - Thailand, GDP - 2699.123242
Country - United Arab Emirates, GDP - 21058.43643
Country - United Kingdom, GDP - 28272.40661
Country - United States, GDP - 37691.02733
Country - Uruguay, GDP - 9581.05659
Country - Venezuela, GDP - 5671.912202
Country - Vietnam, GDP - 757.4009286
Country - Zimbabwe, GDP - 347.7456605

```

6: Print the following:

1. Highest GDP value
2. Lowest GDP value
3. Mean GDP value
4. Standardized GDP value
5. Sum of all the GDPs

```

[17]: gdp_countries.argmax(), gdp_countries.argmin(),gdp_countries.
      ↪mean(),(gdp_countries - gdp_countries.mean())/gdp_countries.std(),
      ↪sum(gdp_countries)

```

```

[17]: (45,
      21,
      11289.409271639683,
      array([-0.70890655, -0.83644045,  0.02449978,  1.09993753,  1.25370438,
             0.6416895 , -0.83970368, -0.65906908,  1.05495905, -0.77242478,
            -0.50895308, -0.68037113, -0.83954024, -0.83362788, -0.32694027,
            -0.67874952, -0.62202214,  0.32084217,  1.53570163, -0.6834911 ,
            -0.37381764, -0.86785003, -0.70989026,  1.27756548,  0.9202445 ,
            -0.78114377, -0.85427339, -0.4113527 , -0.85494663, -0.85561647,
            -0.77491128, -0.43498918, -0.82013522, -0.79116083,  1.28894693,
             0.60012111,  2.21979323, -0.84834706,  0.42332674, -0.86396239,
            -0.4664372 , -0.39243747, -0.73612922, -0.86430354,  0.26342253,
             2.25563616, -0.83312909, -0.62225348,  1.95100371, -0.64617013,

```

```
1.74519145, -0.58572 , 0.32477772, 1.75307099, 2.18780436,  
-0.67407418, 0.76656923, 1.3326448 , 2.07171787, -0.13405333,  
-0.44080136, -0.82643987, -0.85858526]),  
711232.7841133001)
```

[]: