Assignment 5 PDF

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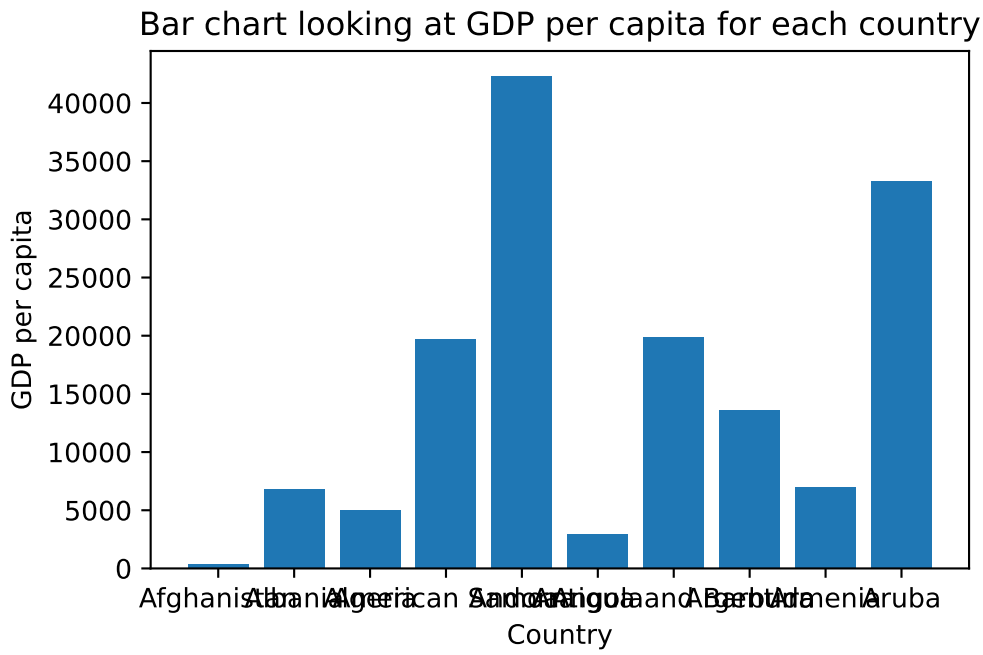
2024-10-09

```
import pandas as pd
import matplotlib.pyplot as plt
df = pd.read_csv("/Users/keerthyrangan/Downloads/wdi.csv")


print(df)

first_countries = df["country"].head(10)
first_gdp = df["gdp_per_capita"].head(10)
plt.bar(first_countries,first_gdp)
plt.title("Bar chart looking at GDP per capita for each country")
plt.xlabel("Country")
plt.ylabel("GDP per capita")

print("Shows the trend of GDP per capita in different countries")
```

```
                  country  inflation_rate  exports_gdp_share  \
0             Afghanistan             NaN          18.380042
1                 Albania        6.725203          37.395422
2                 Algeria        9.265516          31.446856
3          American Samoa             NaN          46.957520
4                 Andorra             NaN                NaN
..                    ...             ...                ...
212  Virgin Islands (U.S.)             NaN                NaN
213    West Bank and Gaza        3.741224          18.436253
214           Yemen, Rep.             NaN                NaN
215                Zambia       10.993204          40.193998
216              Zimbabwe      104.705171          27.955246

     gdp_growth_rate  gdp_per_capita  adult_literacy_rate  \
```

```
0          -6.240172      352.603733                NaN
1           4.856402     6810.114041          98.500000
2           3.600000     5023.252932                NaN
3           1.735016    19673.390102                NaN
4           9.563798    42350.697069                NaN
..               ...             ...                ...
212              NaN             NaN                NaN
213         4.082760     3799.955270          97.843842
214              NaN      698.850350                NaN
215         5.249622     1456.901570                NaN
216         6.522375     1676.821489          89.849998

     primary_school_enrolment_rate  education_expenditure_gdp_share  \
0                              NaN                              NaN
1                        95.606712                          2.74931
2                       108.343933                              NaN
3                              NaN                              NaN
4                        90.147346                          2.66623
..                             ...                              ...
212                            NaN                              NaN
213                      91.764587                              NaN
214                            NaN                              NaN
215                            NaN                          3.58300
216                      95.790001                              NaN

     measles_immunisation_rate  health_expenditure_gdp_share  \
0                         68.0                           NaN
1                         86.0                           NaN
2                         79.0                           NaN
3                          NaN                           NaN
4                         98.0                           NaN
..                         ...                           ...
212                        NaN                           NaN
213                       97.0                           NaN
214                       73.0                           NaN
215                       90.0                           NaN
216                       90.0                           NaN

     income_inequality  unemployment_rate  life_expectancy  total_population
0                  NaN             14.100        62.879000        41128771.0
1                  NaN             11.588        76.833000         2777689.0
2                  NaN             12.437        77.129000        44903225.0
3                  NaN                NaN              NaN           44273.0
```

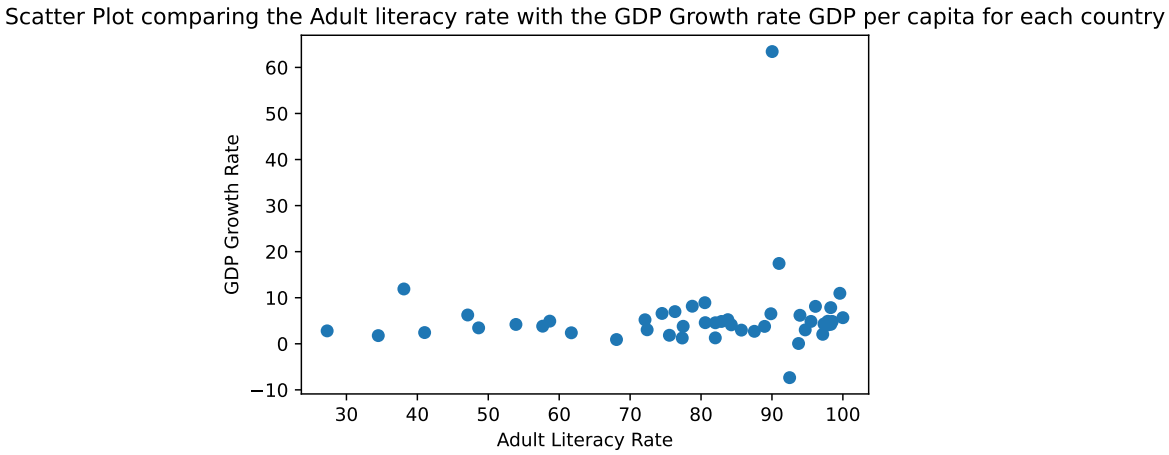
```
4                NaN                NaN              NaN          79824.0
..               ...                ...              ...              ...
212              NaN             12.669        80.319512         105413.0
213              NaN             24.420        73.444000          5043612.0
214              NaN             17.515        63.720000         33696614.0
215             51.5              5.993        61.803000         20017675.0
216              NaN             10.087        59.391000         16320537.0

[217 rows x 14 columns]
Shows the trend of GDP per capita in different countries
```



Overall, the GDP per capita has a large range, but for the first 10 countries, it ranges from 1000 to 400000.

```
plt.scatter(x=df["adult_literacy_rate"],y= df["gdp_growth_rate"])
plt.title("Scatter Plot comparing the Adult literacy rate with the GDP Growth rate GDP per ca
plt.xlabel("Adult Literacy Rate")
plt.ylabel("GDP Growth Rate")

print("Shows the correlation between adult literacy and GDP growth")
```

```
Shows the correlation between adult literacy and GDP growth
```



Overall, the adult literacy rate and gdp growth rate show almost no correlation, as shown by the lack of slope in the line.

```
table_analysis = {
    "Max for Indicators": [max(df["gdp_per_capita"]), max(df["adult_literacy_rate"]), max(df
    "Min for Indicators": [min(df["gdp_per_capita"]), min(df["adult_literacy_rate"]), min(df
    "Average for Indicators": [df["gdp_per_capita"].mean(), df["adult_literacy_rate"].mean()
}

indicators = ["gdp_per_capita", "adult_literacy_rate", "gdp_growth_rate"]
df_analysis = pd.DataFrame(table_analysis, index=indicators)
print(df_analysis)

print("Shows the minimum, maximum, and average of the three indicators")
```

```
                     Max for Indicators  Min for Indicators  \
gdp_per_capita             240862.182448          259.025031
adult_literacy_rate                  NaN                 NaN
gdp_growth_rate                63.439864          -28.758591

                     Average for Indicators
gdp_per_capita                20345.707649
adult_literacy_rate              79.574801
gdp_growth_rate                   4.368901
Shows the minimum, maximum, and average of the three indicators
```