



CLUSTERING AND PCA ASSIGNMENT

**PRESENTED BY-
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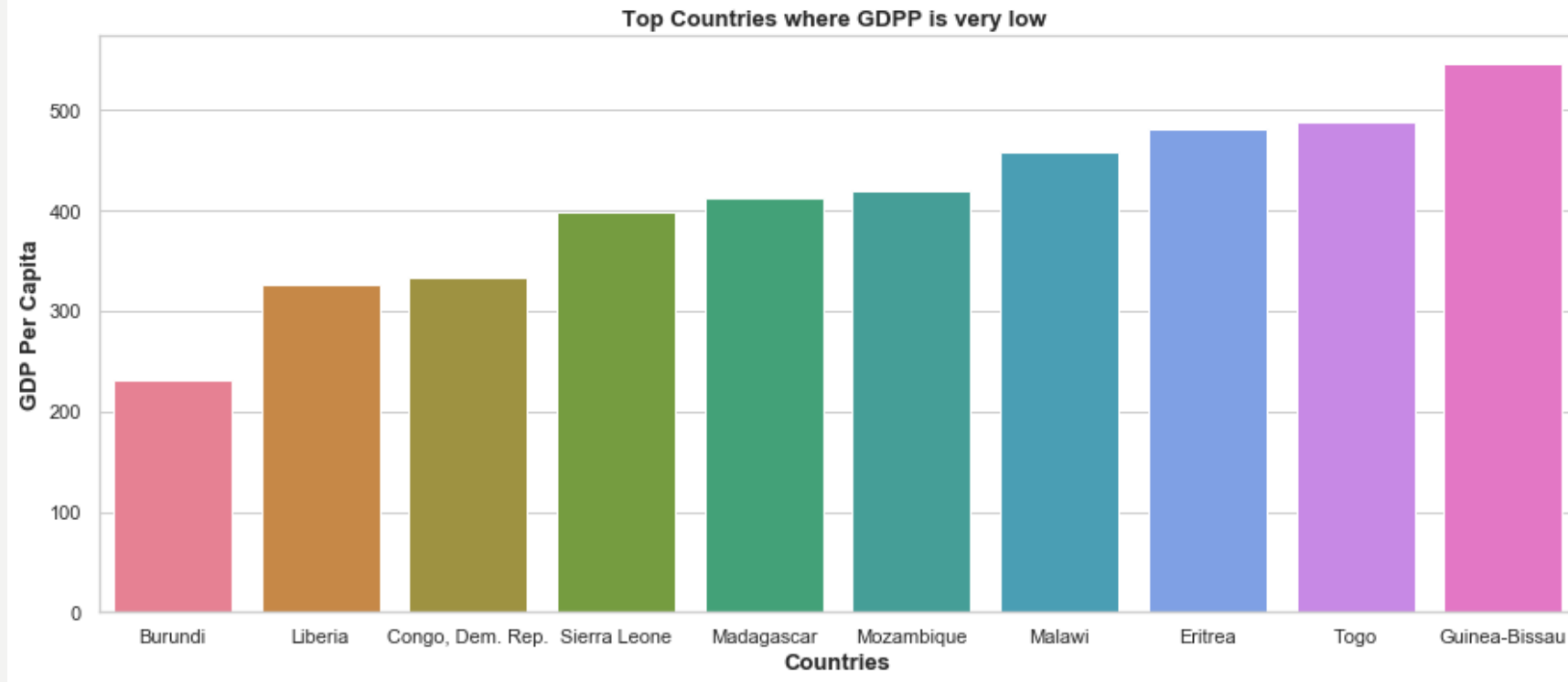
Problem Statement – CLUSTERING AND PCA ASSIGNMENT

- HELP International is an international humanitarian NGO that is committed to fighting poverty and providing the people of backward countries with basic amenities and relief during the time of disasters and natural calamities. After the recent project that included a lot of awareness drives and funding programs, they have been able to raise around \$ 10 million. Now the CEO of the NGO needs to decide how to use this money strategically and effectively. The significant issues that come while making this decision are mostly related to choosing the countries that are in the direst need of aid. The NGO wants to know: The categories of countries using some socio-economic and health factors that determine overall development of the country. The countries which the CEO needs to focus on the most. Based on various market surveys, the NGO has gathered a large dataset containing the socio-economic factors of the countries.

Business Objective –

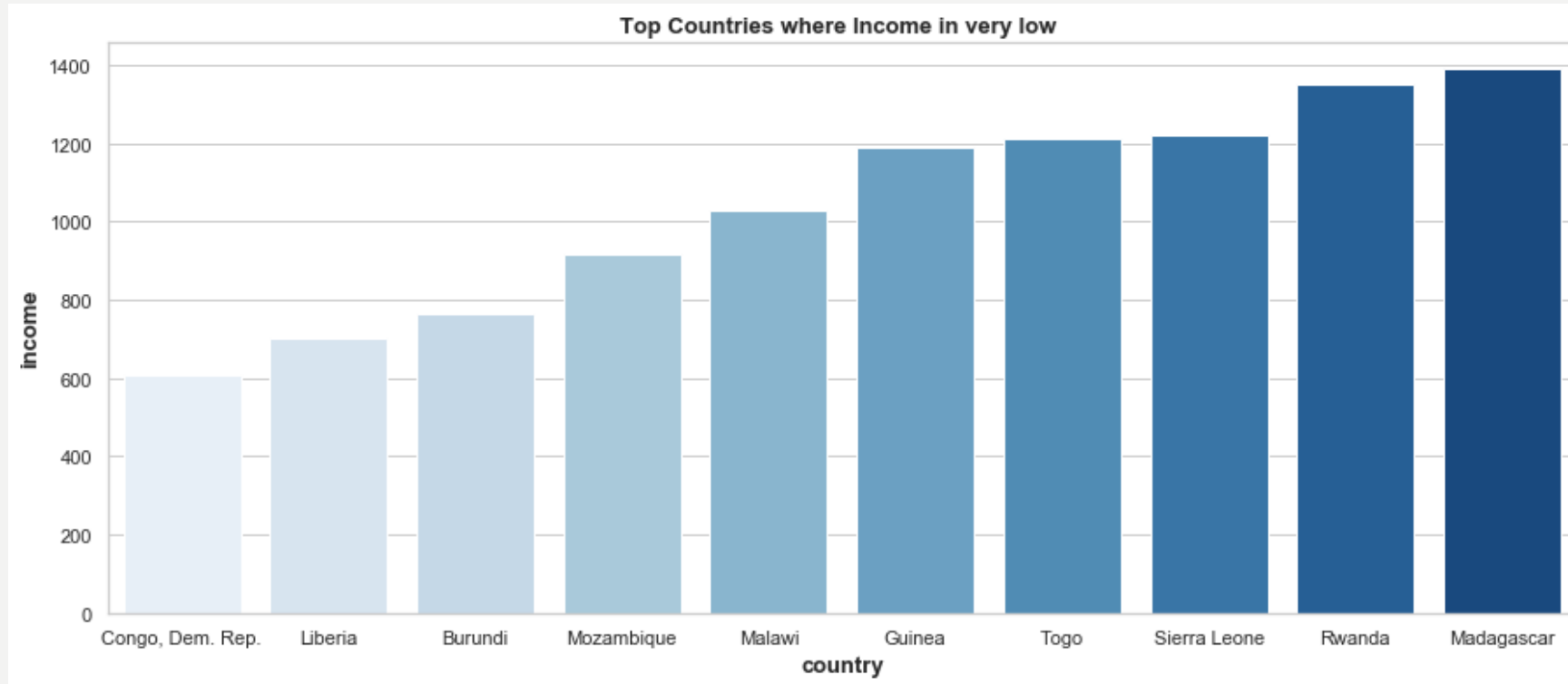
- Our main task is to cluster the countries by socio economic factors mentioned above and present a solution. We are supposed to use dimensionality reduction using PCA to get the visualizations of the clusters in a 2-D form.

TOP 15 COUNTRIES WITH LOW PER CAPITA GDP



- Top 5 Countries with lowest GDP (Burundi, Liberia, Congo, Dem. Rep., Niger, Sierra Leone).

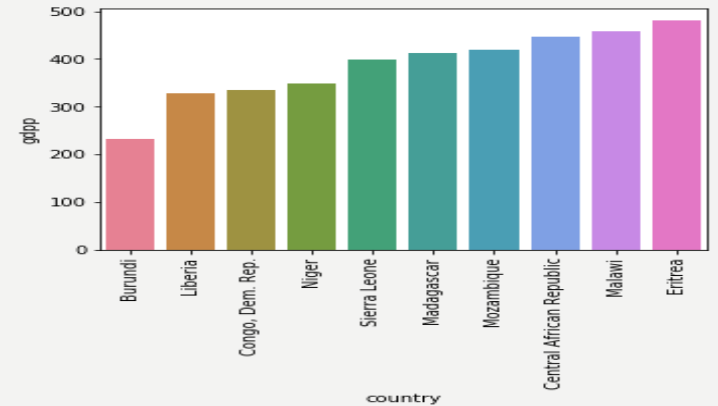
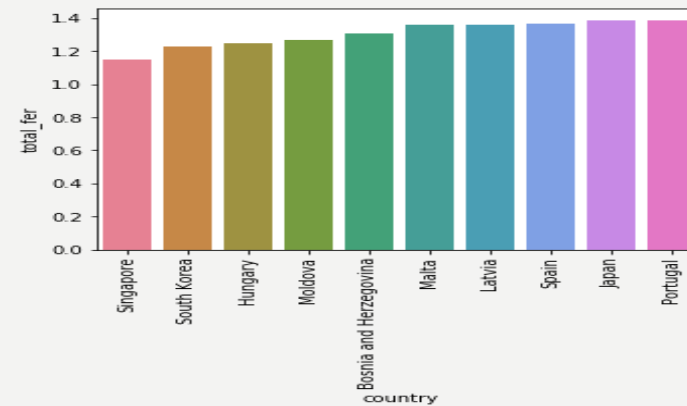
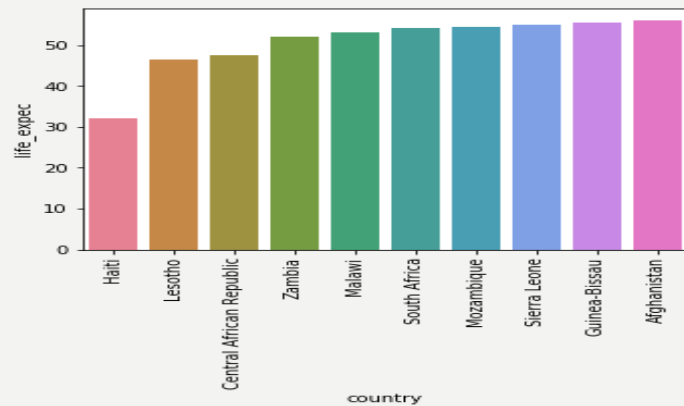
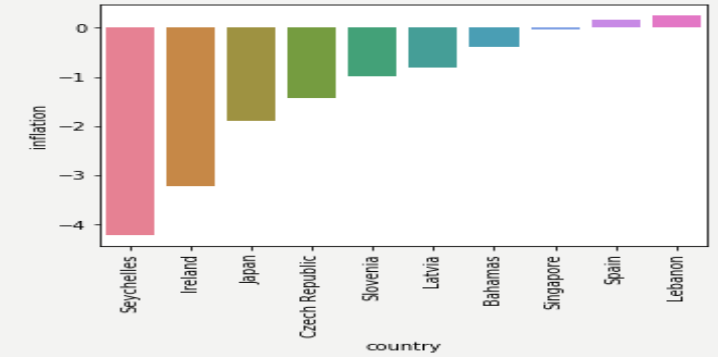
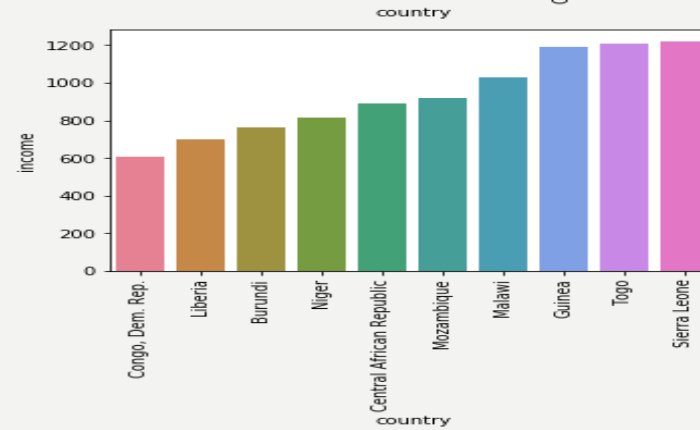
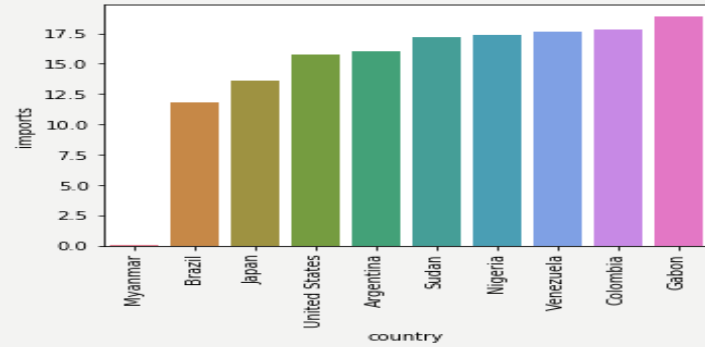
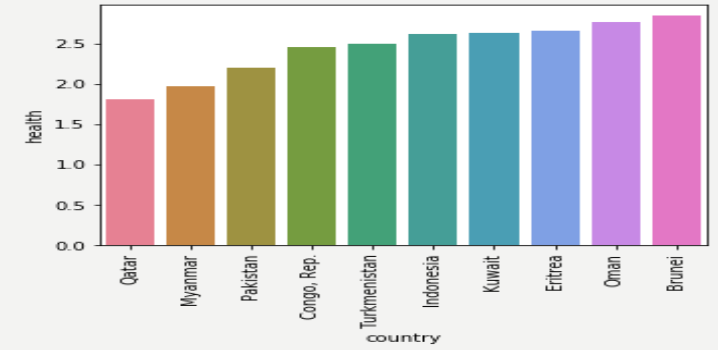
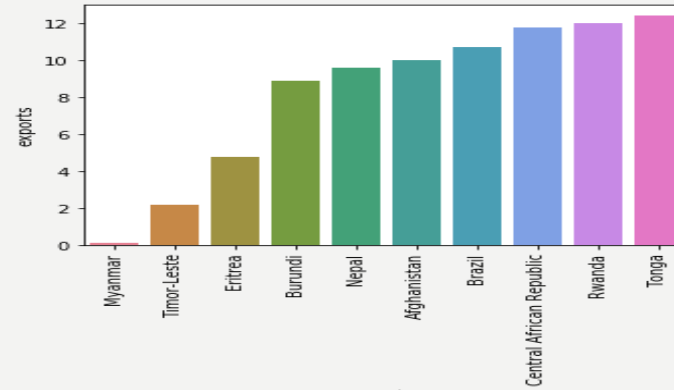
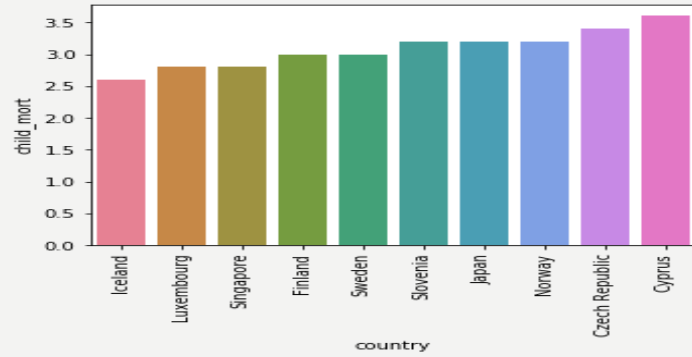
ANALYSIS OF THE COUNTRIES ON THE BASIS OF INCOME



Conclusions drawn based on above graphs:

Top 5 Countries with Low income (Congo. Dem. Rep. , Liberia, Burundi, Niger, Mozambique, Malawi)

ANALYSIS BASED ON ANALYSIS



ANALYSIS BASED ON CURRENT APPLICATION

Conlusions: The countries that HELP should focus are:Child Mortality is highest in Haiti

- Inflation is highest in Nigeria
- Total Fer is highest in Nigeria
- Life expectancy is lowest in Haiti
- GDPP is lowest in Burundi
- Income is lowest in Congo, Dem. Rep.
- Lowest imports and exports are recorded for Myanmar
- Quatar should take care of their Health sector

FINAL RECOMMENDATIONS

Based on analysis Final Recommendation Of Countries on Help should concentrate are:

- Congo, Dem. Rep.
- Sierra Leone
- Burundi
- Guinea-Bissau
- Mozambique
- Guinea
- Malawi
- Burkina Faso
- Gambia
- Uganda
- Togo
- Madagascar
- Tanzania
- Eritrea
- Afghanistan
- Benin
- Gambia
- Pakistan
- Kenya