



HELP International – Analysis

Based on PCA, K-means and Hierarchical Clustering algorithms

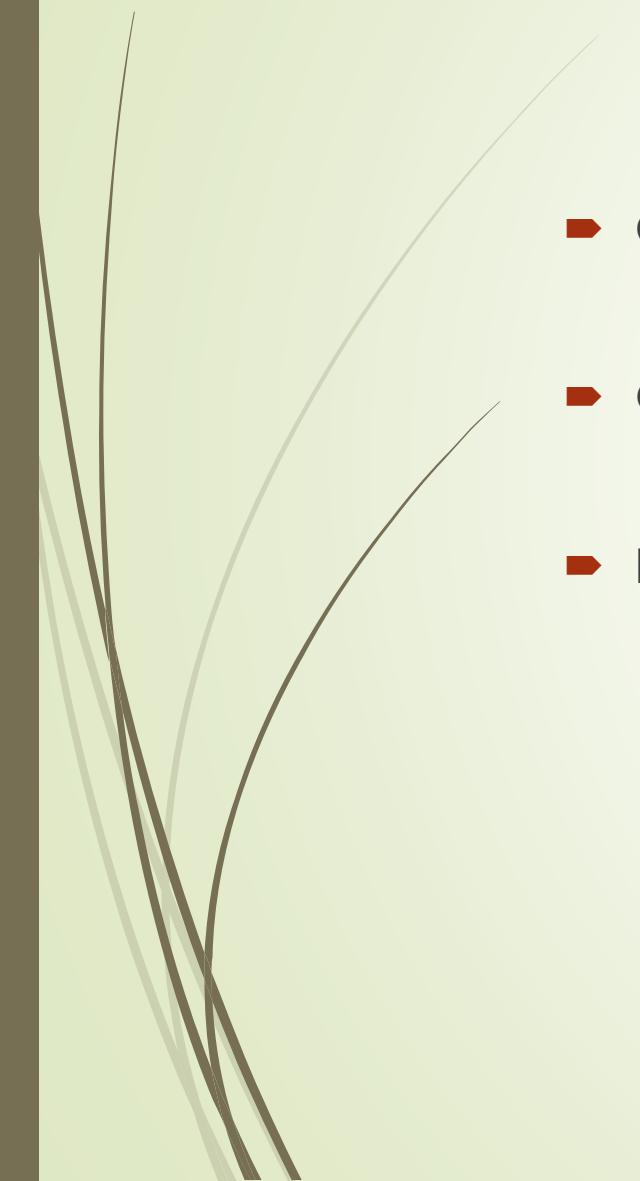


Parameters of the collected data

- 
- Country
 - Child mortality Rate
 - Exports
 - Health
 - Imports
 - Income
 - Inflation
 - Life expectancy
 - Total fertility rate
 - Gdpp



Important parameters considered

- Child mortality rate and life expectancy:
Provides details on life conditions of the country
 - GDPP
Provides details on markets value of financial goods and services
 - Income
Details on average income standard of the country
- 



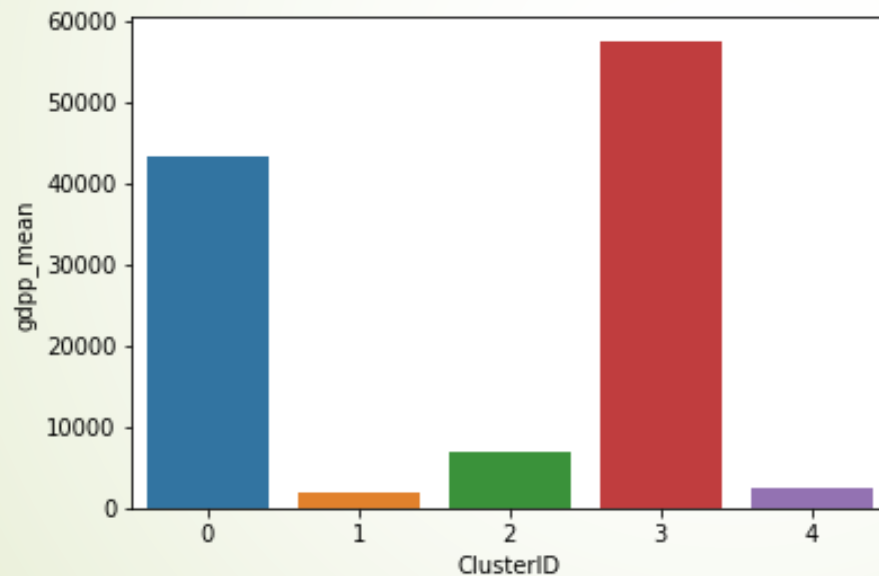
PCA and Clustering



- We had analyzed the data and prepared it for machine learning algorithms.
- We had clustered those data into 5 clusters based on those important parameters mentioned.
- For detecting the countries that needed help, we implemented different clustering process and combined results for wider information on country list.
- We had ended up with certain list of countries based on two algorithmic methods.

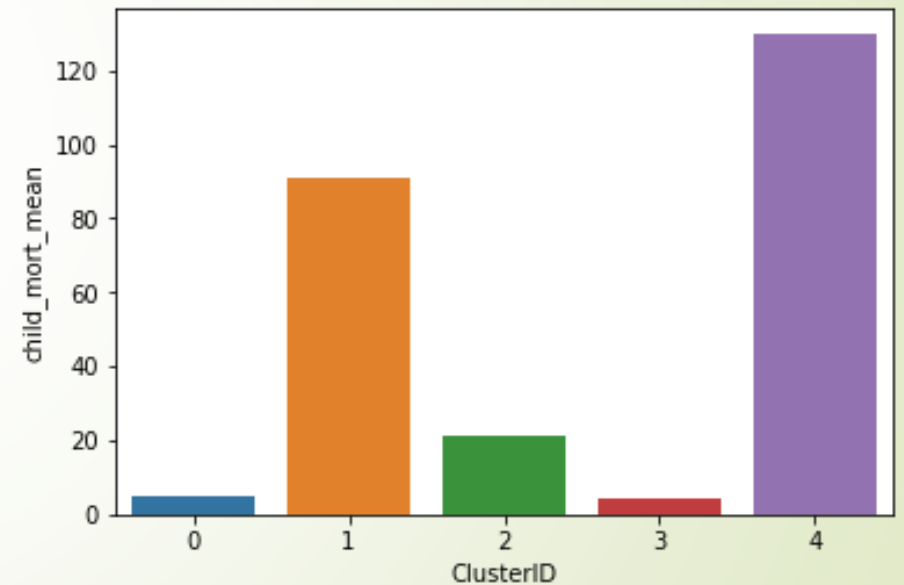
K-means clustering -charts

GDPP Mean



Clusters 1 and 4 indicates very low values in GDPP

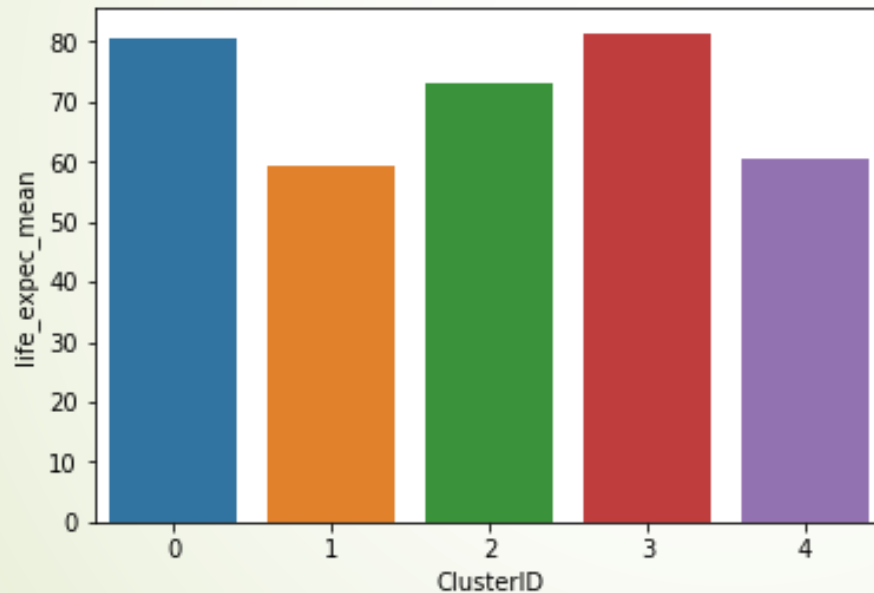
Child mortality rate



Clusters 1 and 4 indicates very high values in child mortality rate

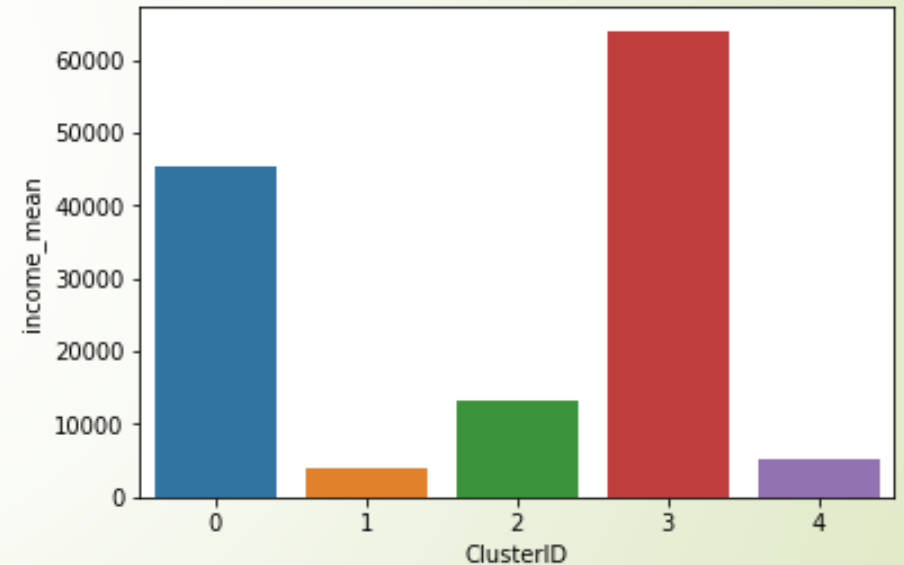
K-means clustering -charts

Life expectancy mean



Life expectancy of clusters 1 and 4 are lower compared with others

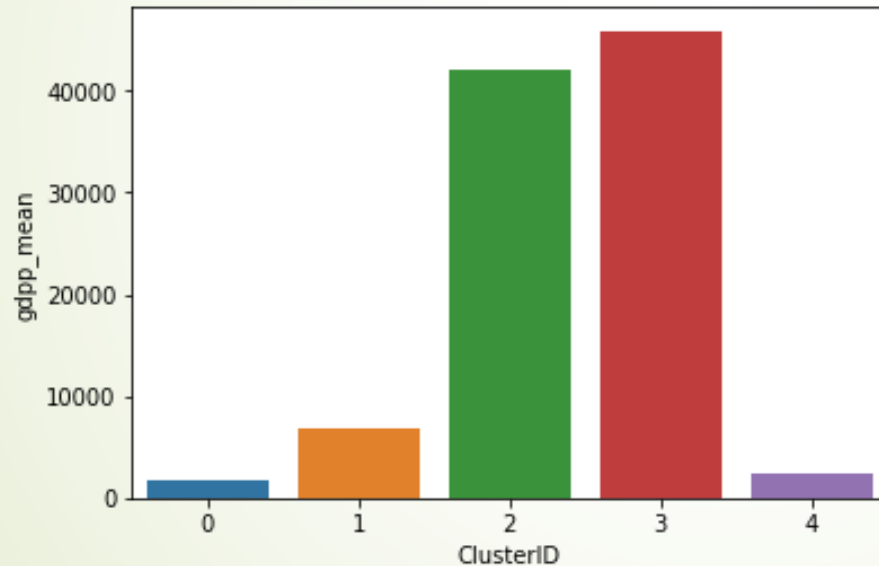
Income mean



Income level of clusters 1 and 4 are very low compared with other clusters

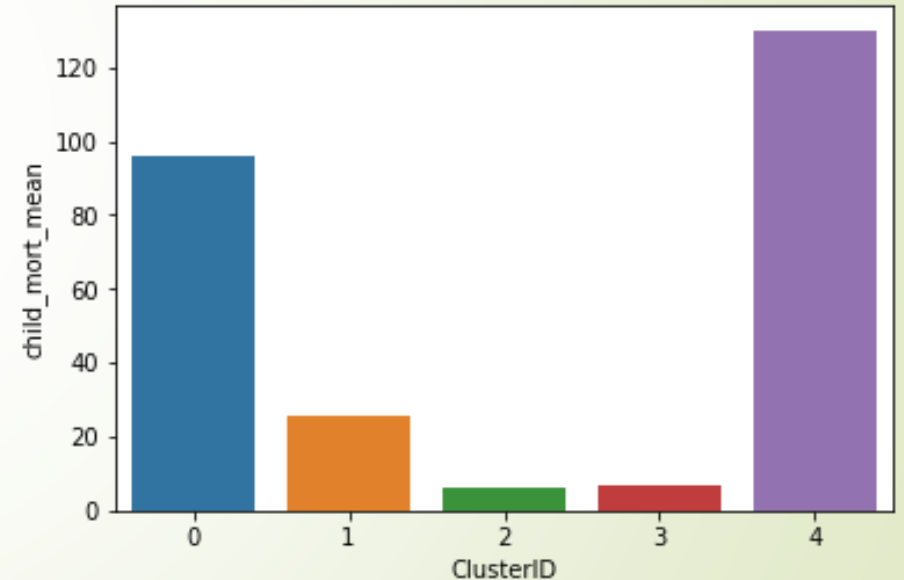
Hierarchical clustering – charts

GDPP Mean



Clusters 0 and 4 having very lesser values comparatively

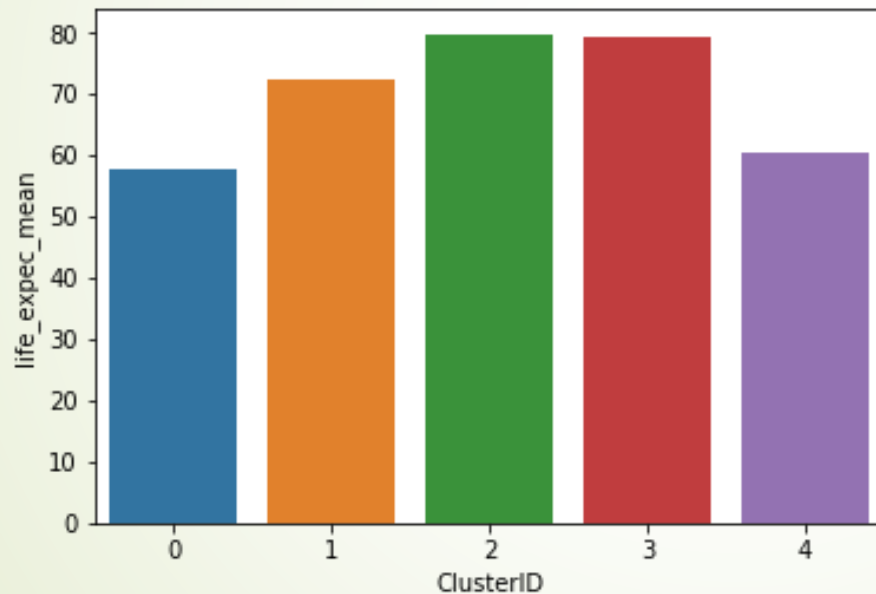
Child mortality rate



Similarly clusters 0 and 4 are having higher mortality rate

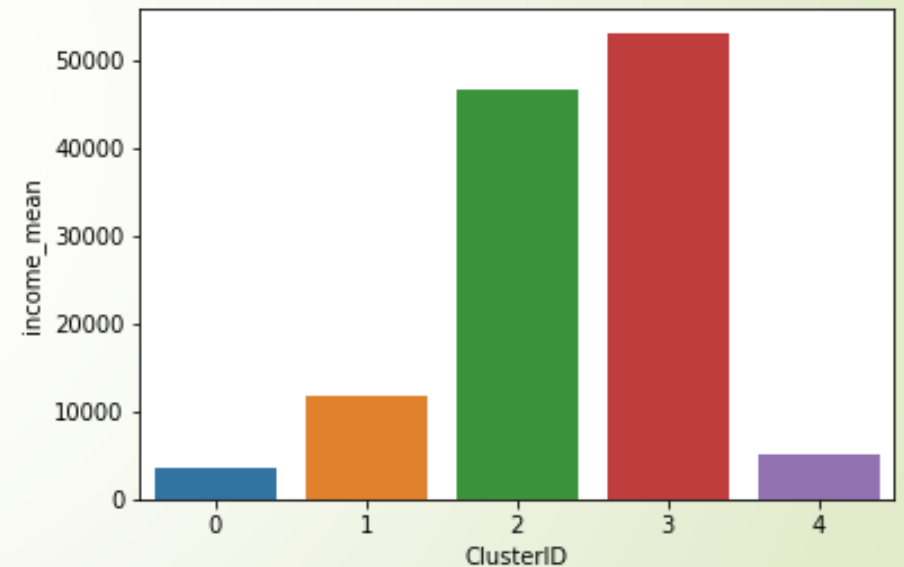
Hierarchical clustering – charts

Life expectancy mean



Similarly life expectancy lower for clusters 0 and 4

Income mean



Same occurs for income rate for clusters 0 and 4



List of countries:

Afghanistan
Angola
Benin
Botswana
Burkina Faso
Burundi
Cameroon
Central African Republic
Chad
Comoros
Congo, Dem. Rep.
Congo, Rep.
Cote d'Ivoire
Equatorial Guinea
Eritrea
Gabon
Gambia
Ghana
Guinea
Guinea-Bissau

Haiti
Iraq
Kenya
Kiribati
Lao
Lesotho
Liberia
Madagascar
Malawi
Mali
Mauritania
Micronesia, Fed. Sts.
Mozambique
Namibia
Niger
Nigeria
Pakistan
Rwanda
Senegal
Sierra Leone

Solomon Islands
South Africa
Sudan
Tanzania
Timor-Leste
Togo
Uganda
Yemen
Zambia



“

Based on the recent disaster or natural calamities, Now we can able to help those countries which are in dire need of our help.

”



Analysis report by:

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