**2019 Index of Economic Freedom – Problem Statement**

**Background:**

Created in 1995 by the Heritage Foundation, *The Index of economic freedom*, is a ranking created to measure the economic freedom in the countries of the world. Now, in its 25th edition, The Economic Freedom Index is poised to help readers track over two decades of the advancement in economic freedom, prosperity, and opportunity and promote these ideas in their homes, schools, and communities. The Index covers 12 freedoms – from property rights to financial freedom – in 186 countries.

**Source of the data:**

This dataset belongs to The Heritage Foundation: [https://www.heritage.org/index](about:blank). This dataset is freely available to download on their website.

**Data Set:**

The data (last updated 26/02/2019) is presented in CSV format as follows:

CountryID, Country Name, WEBNAME, Region, World Rank, Region Rank, 2019 Score, Property Rights, Judical Effectiveness, Government Integrity, Tax Burden, Gov't Spending, Fiscal Health, Business Freedom, Labor Freedom, Monetary Freedom, Trade Freedom, Investment Freedom, Financial Freedom, Tariff Rate (%), Income Tax Rate (%), Corporate Tax Rate (%), Tax Burden % of GDP, Gov't Expenditure % of GDP , Country, Population (Millions), "GDP (Billions, PPP)", GDP Growth Rate (%), 5 Year GDP Growth Rate (%), GDP per Capita (PPP), Unemployment (%), Inflation (%), FDI Inflow (Millions), Public Debt (% of GDP)

All these features are self-explanatory and the learners can research more on the same [here](about:blank).

**Deliverables:**

1. Perform univariate analysis and explore the distribution of the features at hand. - 10
2. Perform bivariate analysis. Identify the correlation between features and take the required actions. - 10
3. Reduce the dimensions at hand and select the minimum no of principal components that can explain at least 95% of variance. Transform the data with the identified no of principal components. - 20
4. Perform clustering to group together the economies that are similar in terms of the economic freedom. Select the optimum no. of clusters and explain the clusters that are formed. - 15
5. Summarize your findings and list the insights of your analysis – 5

Optional – Compare your cluster with the actual overall score and understand the validity of you clusters. You can find the overall score [here](about:blank).

*Happy Learning!!*