**Project 3 – World Indices**

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**Project Description:**

We want to build an interactive website to display factors (GDP, Life Expectancy, Net Migration, and Population) impacting human migration over the past 60years. Further, the website will highlight connection among indices such as the more income a nation has, the higher life expectancy will be. It will have numerous charts using map, time trend analysis, bar chart, regression and etc.

**Tools:**

* ChartJS: for animated charts. This is a new library that we did not study in class.
* MySQL: all data points are related by Country Code. It makes senses to use relational database.
* HTML5, CSS, and JS: for interactive charts.

**Data Source:**

World Bank

[https://databank.worldbank.org/](https://databank.worldbank.org/data/reports.aspx?source=2&series=NY.GDP.PCAP.CD&country=)

**Step-by-step:**

1. Download data from World Bank.
2. Load data to MySQL.
3. Create Flask route.
4. Create skeleton of HTML with CSS.
5. Create story line – what do you want to talk about?
6. Create core charts to illustrate your story.
7. Beautify the site.

**Data Explanation:**

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| Indicator Name | Long definition | Source |
| Net migration | Net migration is the net total of migrants during the period, that is, the total number of immigrants less the annual number of emigrants, including both citizens and noncitizens. Data are five-year estimates. | United Nations Population Division. World Population Prospects: 2017 Revision. |
| Population, total | Total population is based on the de facto definition of population, which counts all residents regardless of legal status or citizenship. The values shown are midyear estimates. | (1) United Nations Population Division. World Population Prospects: 2017 Revision. (2) Census reports and other statistical publications from national statistical offices, (3) Eurostat: Demographic Statistics, (4) United Nations Statistical Division. Population and Vital Statistics Report (various years), (5) U.S. Census Bureau: International Database, and (6) Secretariat of the Pacific Community: Statistics and Demography Programme. |
| Life expectancy at birth, total (years) | Life expectancy at birth indicates the number of years a newborn infant would live if prevailing patterns of mortality at the time of its birth were to stay the same throughout its life. | (1) United Nations Population Division. World Population Prospects: 2017 Revision, or derived from male and female life expectancy at birth from sources such as: (2) Census reports and other statistical publications from national statistical offices, (3) Eurostat: Demographic Statistics, (4) United Nations Statistical Division. Population and Vital Statistics Report (various years), (5) U.S. Census Bureau: International Database, and (6) Secretariat of the Pacific Community: Statistics and Demography Programme. |
| GDP per capita (current US$) | GDP per capita is gross domestic product divided by midyear population. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in current U.S. dollars. | World Bank national accounts data, and OECD National Accounts data files. |