Project description

Intro:

In the realm of global health and demographics, understanding the dynamics between life expectancy and fertility rates over time can provide valuable insights into societal progress and development. This project aims to explore and visualize the changes in life expectancy and fertility rates across 244 countries from 1964 to 2013, utilizing data from Gapminder.org. The goal is to make the visualization as interactive as possible. Hovering over the figures or being able to select what part of the dataset the user wants to see (filtering) is part of this interactive visualization. An example is an interactive plot that is able to show how fertility is related to life expectancy for every country, for every year. With this visualization it can show be shown in which countries people live long lives in small families, or in contrast, short lives in large families. In addition, it is also beneficial to add elements like regions in your visualization to investigate the difference between different regions. Some econometric theory will also be used to attempt to create a model that puts the visual assumptions into numbers.

Research Question:

The central research question driving this project is: “How did life expectancy and fertility change between 1964 - 2013 for different countries and continents?”

Data:

The dataset contains information on the average life expectancy and total fertility (number of children per woman) per capita for each of the 244 countries over the specified time period (1964-2013). The data can be downloaded from Gapminder.org.

Description:

Because of all the progress in medicine and in society since the 1960s, it could be interesting to see how these advancements affected people's life expectancy and total fertility. It is my goal to create interactive plots that help us visualize how the life expectancy and total fertility have changed over time. By doing this I hope to uncover interesting information about how people's life expectancies and fertility rates have transformed over time.

Smaller Research Questions:

- Did the differences in how long people live and how many children they have change over the years?
- Which parts of the world improved the most during this time?
- Did any countries see a decrease in how long people live, and if yes, why?
- Can we create a simple model to predict life expectancy?

Resources:

In this project the library Bokeh is used to make the interactive plots. Other libraries that are used can be found under: "Import necassray libraries".