Life Expectancy Report

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Content

Questions and Sources

What is the average human life expectancy in the world?

How does it differ based on different characteristics?

In which countries did the life expectancy improve the most?

What characteristics of countries are predictors for differences in life expectancies?

Global Health Observatory - Data repository


World Bank - Data bank

Data transformation

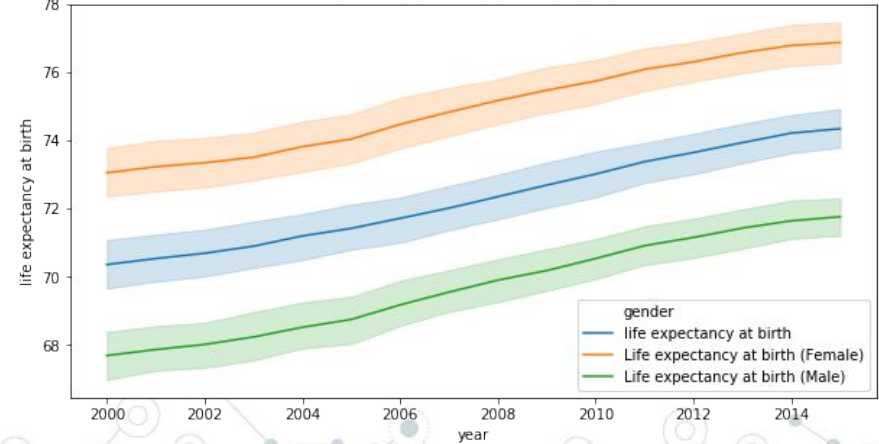| 01	**Merging**	• Transforming individual data sets into agreed format • Country name mapping • Combining individual data sets
02	**Subset Selection and data cleaning**	• Investigating percentage of missing values • Selection of countries, attributes and time frame • Exploring attribute types and value ranges
03	**Imputation**	• KNN - Imputation of missing values • Assigning each (year, country) instance to an income group • Interpolating life expectancy information for line plots

Explanatory Analysis

Life expectancy at birth for countries with high variance
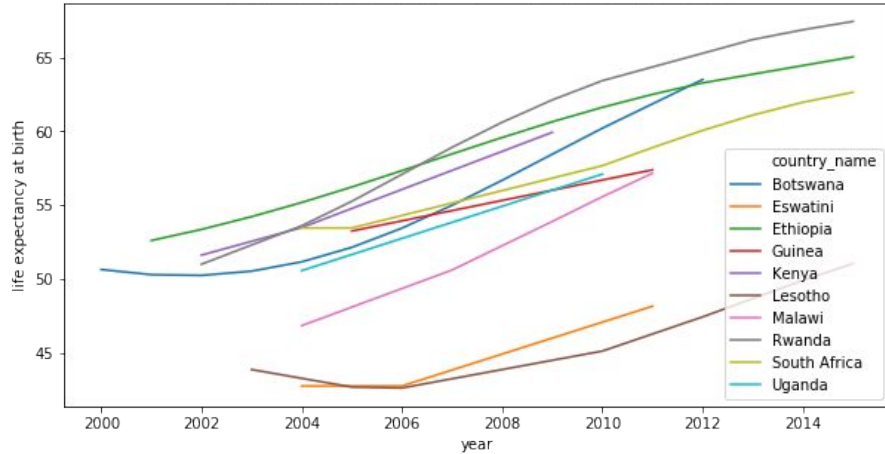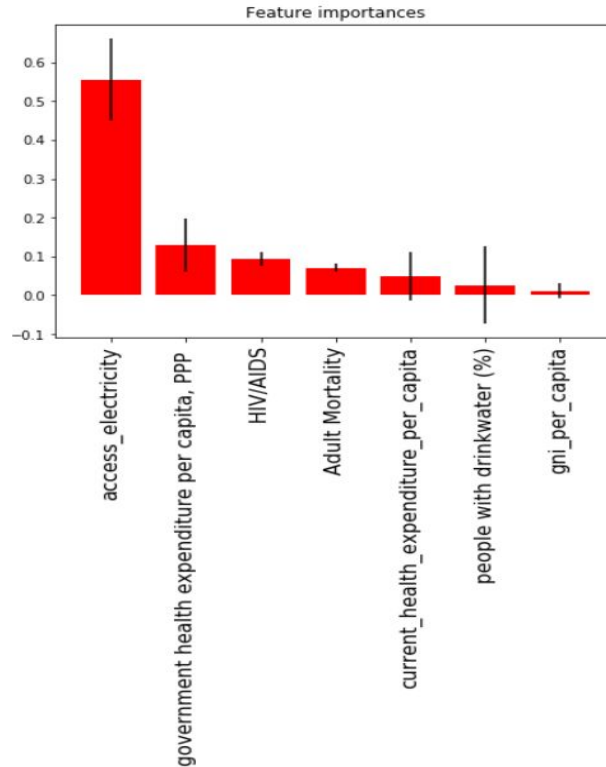

Life expectancy at birth per Income group
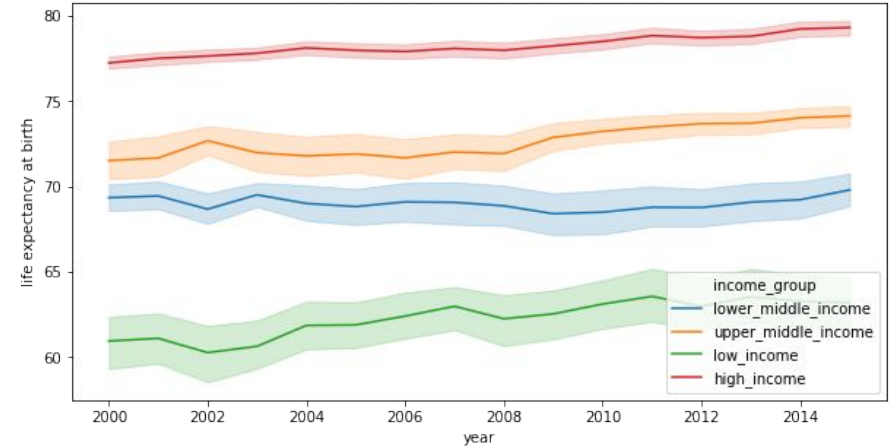
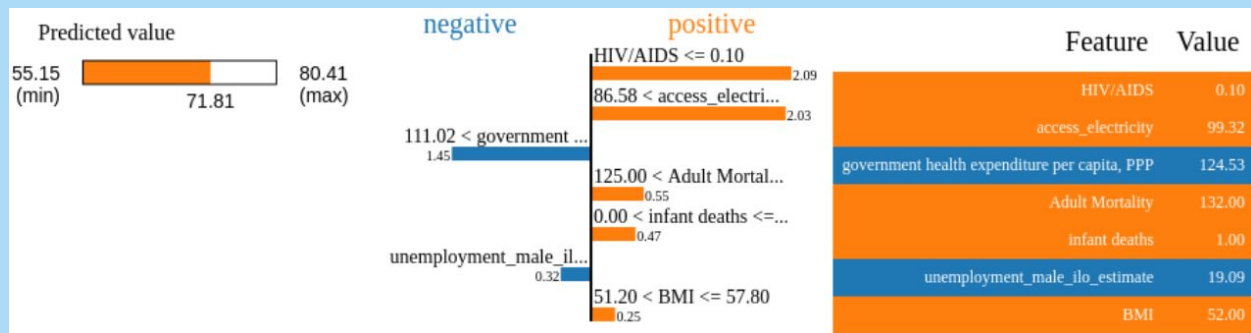

Life expectancy at birth per Gender

Model building

◎ LASSO

   ○ Tr. MSE 10,59 years

◎ RandomForest

   ○ Tr. MSE: 1,43 year

   ○ Test MSE: 2 years

Feature importances

access_electricity

government health expenditure per capita, PPP

HIV/AIDS

Adult Mortality

current_health_expenditure_per_capita

people with drinkwater (%)

gni_per_capita

Factor Analysis

Economic Factors

Living standards

Infrastructure
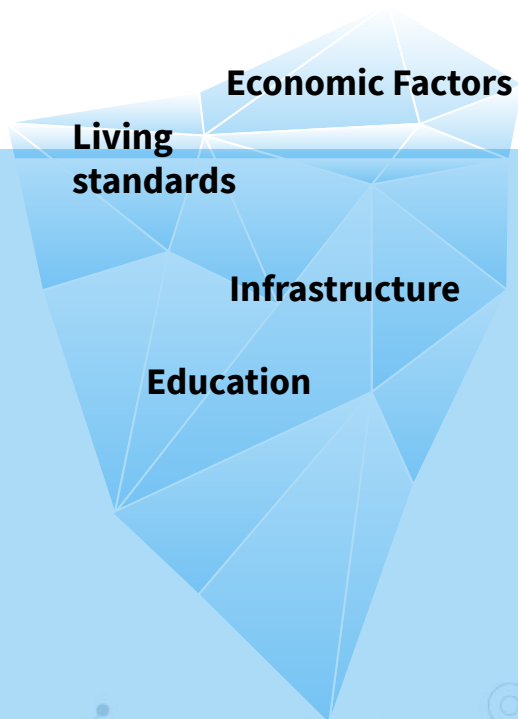
Education

Sum Up

Data to compare ALL countries is hard to find

Rising life expectancy is a global trend

Men are expected to live 5 years shorter than women

Health features, education and peace can be expressed by economic factors