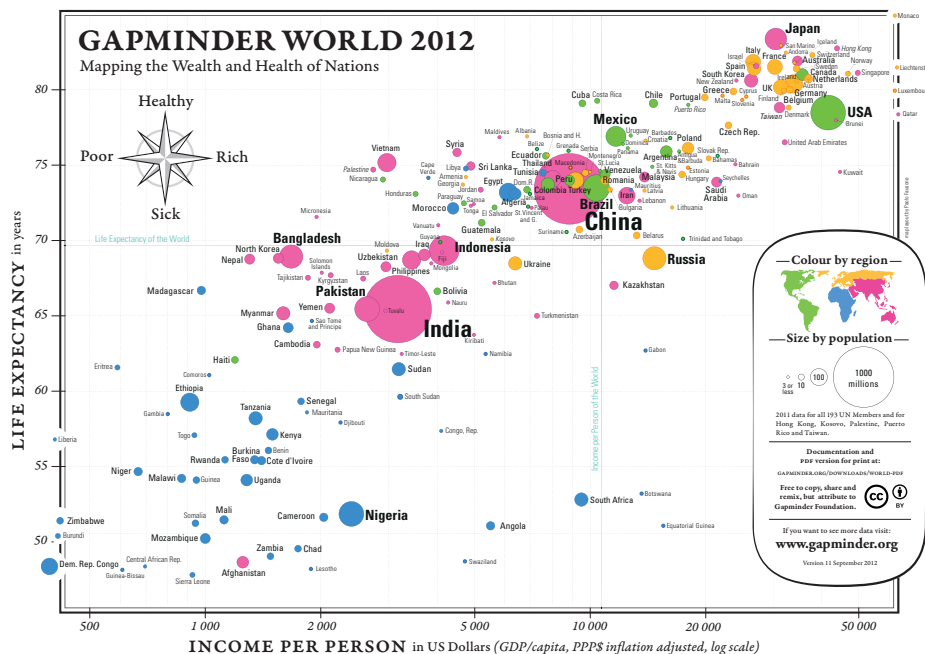


COMP40610 Information Visualisation Assignment: *Channelling Hans!*

Semester 1 2016-2016

Description

Hans Rosling is a data visualisation legend. His 2006 TED talk, The Best Stats You've Ever Seen, is one of the most viewed videos on the TED website (<http://bit.ly/2doLzAY>). An interactive version of the GapMinder World visualisation used in that demo is available at www.gapminder.org/world (with a newer beta version at www.gapminder.org/tools). A poster of the visualisation is reproduced below. In this assignment we will create information visualisations that are a homage to Hans Rosling.



Source: <http://www.gapminder.org/GapminderMedia/wp-uploads/Gapminder-World-2012.pdf>

Part 1 – Copying Hans

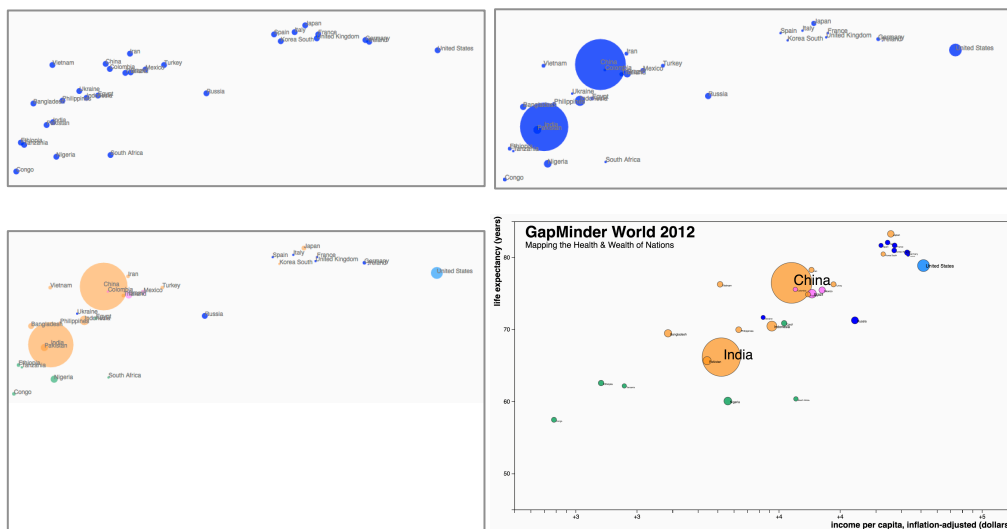
In this assignment you must recreate the GapMinder World visualisation using d3.js. Your visualisation should include the following:

- A bubble plot representing the countries of the world
 - Countries of the world described by Income Per Capita and Life Expectancy mapped to x and y axis position
 - Population of each country mapped to bubble size
- Appropriate labels and axes
- Appropriate use of colour
- Country name labels
- Ability to view data for a particular year
- Ability to animate the change in country statistics from year to year (1900 – 2015)
- At least one other feature, based on or inspired by the GapMinder World visualisation

The data required to drive this visualisation is available in the file Gapminder_All_Time.csv. The fields in this file are as follows:

- Country: The country name
- Year: The year for this data observation
- Population: The population of the country in this year
- LifeExp: Average life expectancy in years
- GDP: Average GDP in inflation adjusted dollars
- Code: The country code
- Region: The region in which the country belongs (similar to continent)
- Area: The area of the country in square kilometres
- Coastline: the number of kilometres of coastline belonging to the country
- Government: The type of government in the country

Hint: It is recommended that you build your final visualisation in a series of simple steps, for example those shown below.



Part 2 – Extending Hans

In this assignment you must create a second visualisation that supplements the version of the GapMinder World visualisation created in Part 1. This visualisation should answer some other question (or questions) relevant to the information shown in the GapMinder World visualisation.

The characteristics of this visualisation should be as follows:

- Can be built in either D3 or Tableau public
- The page could include a suite of visualisations (e.g. a dashboard), or one large visualisation
- The visualisation should have a defined purpose and answer a specific question (or questions)
- Must be based on publicly available data. Interesting data sources include:
 - Other GapMinder datasets (<https://www.gapminder.org/data/>)
 - UN databases (<http://unstats.un.org/unsd/databases.htm>)
 - International flights data (openflights.org/data.html)
 - Government open data (<http://index.okfn.org/>)
 - A personal dataset (to be made available in a cleaned, anonymised form):
 - A download of events from a Google calendar account with multiple calendars (support.google.com/calendar/bin/answer.py?hl=en&answer=37111)
 - A download of an email dump from an Google email account (support.google.com/mail/bin/answer.py?hl=en&answer=12103&ctx=mail)
- Look at the Guardian data blog (www.theguardian.com/data), the Irish Times data team (www.irishtimes.com/news/irish-times-data) and the New York Times R&D Lab (www.nytlabs.com/) for inspiration

Submission

Submission details:

- **Submission date:** Wednesday 23rd November 2016 before 23:59
- **Submission method:** Submissions should be made through the module Moodle site
- **Submission format:** Submissions should include
 - Part 1
 - The html files and data files required to run your visualisation or a link to a live working version of your visualisation
 - Part 2
 - The html files and data files required to run your visualisation or a link to a live working version of your visualisation
 - A document based on the template provided that describes your visualisation
- **Late submissions:** Late submissions will be penalised at 5% per day.

Marking

This assignment can be completed by students on their own, or in a group of no more than two. Students in groups will receive the same mark, however, proof that both students in a group worked on the project may be sought.

- **Part 1 (60% of assignment)** will be marked as follows:

20%	A bubble plot representing the countries of the world
10%	Appropriate labels and axes
10%	Appropriate use of colour
5%	Country name labels
20%	Ability to view data for a selected year (1900 – 2015)
20%	Ability to start and stop a continuous animation of the change in country statistics from year to year (1900 – 2015)
10%	At least one other feature, based on or inspired by the GapMinder World visualisation
5%	Readable, well commented, quality code

- **Part 2 (40% of assignment)** will be marked using the following categories:
 - Question Definition
 - Coverage of State of the Art
 - Appropriateness of Visual Encodings
 - Appropriate Use of Colour
 - Appropriate Use of Interactions and Transitions
 - Data Manipulation
 - Document Quality