# **CSCI 552** (Spring 2022)

# Project #1

**Handout**: Thursday, February 3, 2022
**Due**: 11:59 pm, Thursday, February 24, 2022
**Total points**: 60

In this project, you will use the datasets available at https://www.gapminder.org/data/ to experiment with multi-dimensional visualization techniques using D3.

1. Extract data from https://www.gapminder.org/data/ to construct a $d$-dimensional ($d \geq 5$) dataset. In this dataset, countries or regions are individual data points. Each data point will have $d$ number of attributes which come from https://www.gapminder.org/data/. You need to clean the dataset to ensure consistencies. For example, all attributes should come from roughly the same time period, and missing data should be avoided or filled. The selection of attributes to download should be based on some interesting ideas or hypothesis that you are trying to demonstrate or confirm.

2. Use D3 to visualize your $d$-dimensional dataset with 3 different multi-dimensional data visualization techniques that D3 provides: Scatterplot Matrix, Parallel Coordinate, and Streamgraph. You will need to provide some interactive functions in each of these visualizations, and they should reveal different aspects of the data to demonstrate your hypothesis or insight.

3. Write a description about what insight you gain from these visualizations: discovery, revelation, surprises, etc.

Please submit your D3 source code and some representative visualization results as jpeg images.