**Lab 13 Instructions**

In today’s lab you will build a program that performs fuzzy clustering. Download the dataset from:

<https://www.kaggle.com/rohan0301/unsupervised-learning-on-country-data?select=Country-data.csv>

The same data has been uploaded in the Nugget portal under the “Other Content”. So, you can get it from there also. The main file is the country-data.csv and you need to read it in (using pandas or otherwise). Perform fuzzy k-means clustering on the data with k = 2, 3, 4, 5. While clustering, ignore the first column since it is the name of the country. For each value of ‘k’ calculate the silhouette value and hence find which value of ‘k’ is most appropriate.

Upload your program and a sample output on Moodle. Also, show your work, even if it is partial, during the lab.