Homework 2: Exploring Data

Objective: Explore and analyze data without using an information visualization system.

Download the **Countries Development Indicators** dataset (The dataset is in the "**Data**" folder in the Files section of Canvas.) You can use Excel or another spreadsheet or data exploration software, but avoid the visualization and charting functionality of Excel. Your goal is to perform an exploratory analysis of the data set, to better understand the data set and its characteristics, and to develop insights.

Where did this data come from? This is from the United Nations, Human Development Report 2019 (http://hdr.undp.org/en/data). The cleaned version on Canvas was derived from a big downloadable original file: http://hdr.undp.org/sites/default/files/hdro_statistical_data_tables_1_15_d1_d5.xlsx You can look at the original file for more information about the indicators as the column names in the Canvas version have been truncated.

Create a document with four things:

List (bullet list of items) of five analytics **queries or questions** that a person may have about this data set. These would be questions that an analyst examining the data might be pondering.

List (bullet list of items) of five "**insights**", chunks of knowledge, or deeper questions that you either encountered or gained while exploring the data. An insight could be some understanding of the data and its characteristics that is not relatively obvious or intuitive. It is something that most people might not realize initially. Note that an insight or knowledge chunk simply may be a deeper question that arose in your mind while exploring the data. And your analysis may not have been sufficient to answer the question.

A paragraph about the **process** you used to do the exploration and analysis. What did you do in Excel? (no step is not important!) Did you draw pictures? Did you take notes? What did you take notes on? What did you draw? This paragraph should be a general description of your analytic workflow.

A paragraph about **challenges or problems** that you encountered in doing the analysis this way. Did anything limit or frustrate you? If nothing did, perhaps there was something that was more difficult than you thought it should be. Nothing is perfect, so you should be able to list some potential issues here. So, to sum up, your assignment should have two bullet lists of five items followed by two paragraphs.

Grading: We will evaluate the quality of the insights you listed and the detail given for the process you went through. We are looking for things that we find interesting or perhaps unexpected. This is subjective. For the second and third parts, we will evaluate if you did what the assignment asked.

To turn in to Canvas: A word document or PDF with the answers above.