MATH 189Z Homework 1:
Analyzing COVID-19 Data with Regression

In this homework, you will be using a Jupyter Notebook to do some data analysis on COVID-19 cases around the world. The goal of this homework is to get you familiar with Jupyter Notebooks, linear regression and some basic data analysis tools in Python. If you have already seen these things this will be a good opportunity to review and refine your skills, and if you are new to data analysis in Python we encourage you to take the time to make sure you understand each step, as it will help you later on to be familiar with these tools.

This homework has five main parts.
1. Getting Jupyter Notebook (and Anaconda) up and running on your personal computer.
2. A tutorial walking you through loading data and running a linear regression.
3. **Task 1:** Work with existing data to run another regression.
4. **Task 2:** Pose and investigate a research question.
5. **Task 3:** A couple sentences about what you want out of this course and how long this assignment took you

Downloading Jupyter (and Anaconda):
Follow this tutorial to do this: [How to get Jupyter up and running](#) (instructions are on pg 2). We will by using Python 3.7 for this class.

Deliverable:
We are not asking you to turn in your code. Instead, submit a document containing your key results and explanations. Please note that we are not looking for a formal report. Instead, it is an opportunity for you to (concisely) show us what you chose to do and how you thought about it. Even if your regressions are inconclusive that's totally fine, just explain what you did and why you think you got the results you did. Your submission should include the following:

Task 1:
- Graph of new Linear Regression
- Important statistics (e.g. R^2, p-value)
- Results, Interpretation, and Discussion

Task 2:
- Research question
- Data source and description of the data you have found (a sentence or two is all you need)
- Methods and results with accompanying graphs
  - Make sure to discuss the credibility of your results

Task 3:
We are still in the process of designing the assignments for this course so we wanted to get an idea of what you all wanted to get out of it. Please include:
- A few sentences describing why you decided to take this course/what you were hoping to get from it.
- How long it took you to complete this assignment