Final Project Summary

For my project, I chose an API from OpenWeatherMap to pull weather data for 20 cities. It was relatively simple to obtain a login and obtain a key to access the data. I used the free data rather than the subscription, which limited what was available to be pulled. The data pulled as a large dictionary with two entries, the item count and a list with all of the weather data. The first step was to isolate just the weather data, so I extracted just the list from the dictionary. I experimented with being able to access the different records, because one of the records had additional records in it. I needed to be able to access each level. I created code to get to each key/record value. I only wanted certain variables, as some were not informative or descriptive. I created a new dictionary that contained only the variables that I wanted. I changed the header names of these variables to be more descriptive. I also changed the format for the variables that had time and temperature to be standardized and more user friendly to read.

Being able to use an API to access this data was super quick and easy. This would be very beneficial to a data scientist if they needed to access this information on a regular basis. By creating code that takes the raw data and changes it into user friendly, human readable data, it can be repeated quickly and easily each time it needs to be run, using automation. I think this is very relevant in the data science world, because these processes are needed on a very frequent basis. Depending on the research process, I think using API’s to access data could be done quite often in the data science world.

The one challenge that I had was trying to flatten the data. I created my own code, but it has multiple steps. I found code on the internet that would flatten the file, but it didn’t keep the data record together for each city. I need to experiment or research more to find ways to flatten JSON data, because I like using JSON files, and I think this is something that is probably done often enough that there is more simple code available to do it.