## API Write Up

# 1) Overview:

#### Part I - WeatherPy

In this example, I was creating a Python script to visualize the weather of 500+ cities across the world of varying distance from the equator. To accomplish this, you'll be utilizing a simple Python library, the OpenWeatherMap API, and a little common sense to create a representative model of weather across world cities.

## Part II - VacationPy

Use jupyter-gmaps and the Google Places API for this part of the assignment.

To complete this part of the assignment, you will need to do the following:

Create a heat map that displays the humidity for every city from Part I.Also aarrow down the DataFrame to find your ideal weather condition

#### 2) Data and Model

I runned linear regression on each relationship. This time, separate the plots into Northern Hemisphere (greater than or equal to 0 degrees latitude) and Southern Hemisphere (less than 0 degrees latitude):

Northern Hemisphere - Temperature (F) vs. Latitude

Southern Hemisphere - Temperature (F) vs. Latitude

Northern Hemisphere - Humidity (%) vs. Latitude

Southern Hemisphere - Humidity (%) vs. Latitude

Northern Hemisphere - Cloudiness (%) vs. Latitude

Southern Hemisphere - Cloudiness (%) vs. Latitude

Northern Hemisphere - Wind Speed (mph) vs. Latitude

Southern Hemisphere - Wind Speed (mph) vs. Latitude

3) Limitation and Bias

Some cities are located far away in the north or south to cause the outliners.

### 4) Trend

We can see the U shape of the scatter show the temperature an latitude has strongest correlation. Also the less humid cities are even colder when the temperature is same.