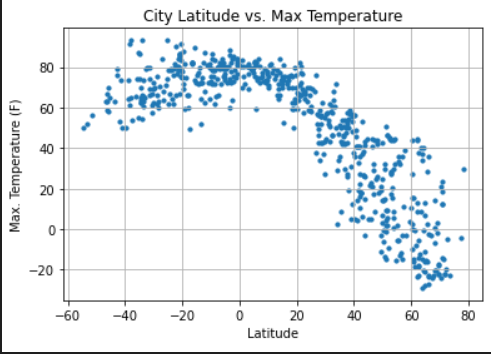
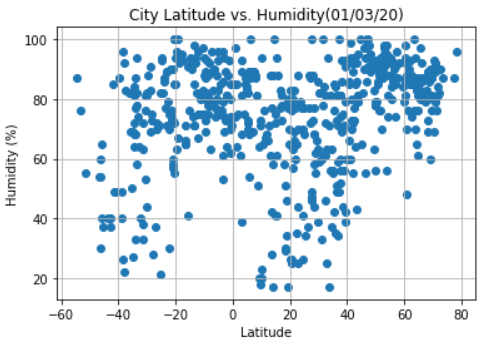
# **Data Analysis(WeatherPy)**

## **Latitude Vs. Temperature Plot**



* Highest temperature is found at 0 latitude
* The latitude increases or decreases, when temperature drops.
* Lower the Temperature in Northern Hemisphere.

## **Latitude Vs. Humidity Plot**

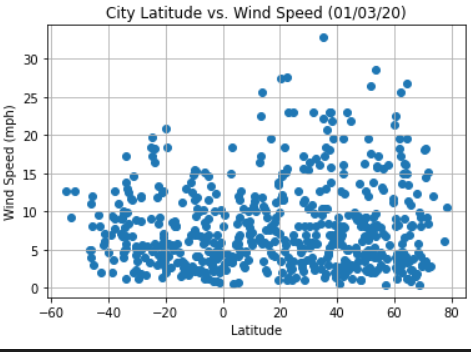


* Polar regions have lower humidity
* Latitude in southern hemisphere gets higher when humidity gets higher.

## **Latitude Vs. Cloudiness Plot**

* There is an extensive spread of cloudiness data across the latitude.
* No relationship can be seen between cloudiness and latitude.

**Latitude Vs. Wind Speed Plot**



* Wind speed data is widely spread across the latitude.
* The wind speed is mostly between 0 and 10 mph
* In Northern Hemisphere some cities may experience higher occurrence of wind speed.

# **Linear Regression(correlation)**

**Northern Hemisphere - Max Temp vs. Latitude Linear Regression**

* There is a strong negative correlation between latitude and max temperature for northern hemisphere.
* The r-squared is: -0.8741737733086621

**Southern Hemisphere - Max Temp vs. Latitude Linear Regression**

* There is a moderate positive correlation between latitude and max temperature for southern hemisphere.
* The r-squared is: 0.45188628442055945

**Northern Hemisphere - Humidity (%) vs. Latitude Linear Regression**

* There is a moderate positive correlation between latitude and humidity for northern hemisphere.
* The r-squared is: 0.3769259637413867

**Southern Hemisphere - Humidity (%) vs. Latitude Linear Regression**

* There is a moderate positive correlation between latitude and humidity for southern hemisphere.
* The r-squared is: 0.41972948104952373

**Northern Hemisphere - Cloudiness (%) vs. Latitude Linear Regression**

* There is a weak positive correlation between latitude and cloudiness for northern hemisphere.
* The r-squared is: 0.16585873469335982

**Southern Hemisphere - Cloudiness (%) vs. Latitude Linear Regression**[**¶**](https://render.githubusercontent.com/view/ipynb?color_mode=light&commit=4fd90bbc5e49ca0ce032a154ace05c96db250610&enc_url=68747470733a2f2f7261772e67697468756275736572636f6e74656e742e636f6d2f6b616e616d6f6f72652f707974686f6e2d6170692d6368616c6c656e67652f346664393062626335653439636130636530333261313534616365303563393664623235303631302f5765617468657250792f5765617468657250792e6970796e62&nwo=kanamoore%2Fpython-api-challenge&path=WeatherPy%2FWeatherPy.ipynb&repository_id=234416092&repository_type=Repository#Southern-Hemisphere---Cloudiness-(%)-vs.-Latitude-Linear-Regression)

* There is a weak positive correlation between latitude and cloudiness for southern hemisphere.
* The r-squared value is: 0.0035263772085582894

**Northern Hemisphere - Wind Speed (mph) vs. Latitude Linear Regression**

* There is a weak positive correlation between latitude and windspeed for northern hemisphere.
* The r-squared value is: 0.04019723576144484

**Southern Hemisphere - Wind Speed (mph) vs. Latitude Linear Regression**

* There is a weak negative correlation between latitude and wind speed for southern hemisphere.
* The r-squared is: -0.1720018187002393

# **Data Analysis(VacationPy)**

# **Humidity Heat Map**

A heatmap provides a visualization that can be used to illustrate the intensity of data at geographical points. In the figure below, the humidity heat map Layer is aided, with a coloured overlay that is appearing on top of the map. By default, areas of higher intensity appear in colour red , and areas of lower intensity are in green. To show the humidity in the heat map, the data used is from a [WeightedLocation](https://developers.google.com/maps/documentation/javascript/reference#WeightedLocation) object.Furthermore, the humidity heat map layer was cutomized by by using one of the heatmap layer option,s maxIntensity which shows he maximum intensity of the heatmap. By default, heatmap colours are scaled according to the greatest awareness of points at any particular pixel on the map. This property allows you to specify a fixed maximum. Setting the maximum intensity can be helpful when your dataset contains a few outliers with an unusually high intensity.

#### 

**Hotel Map**

When it comes to planning a trip, Google maps is one of the most popular “mapping” tools used by majority of people. It allows travellers to search for any city or place. Google Maps is accessible from the Google search engine when you click on the “map” tab, and also via mobile application for phones and tablets.

