From the data, we can see there is a moderate correlation between the latitude and the max temperature, this correlation seems to be a little stronger in the northern hemisphere, with a positive correlation of r^2 = 0.657, the southern hemisphere has a negative correlation of r^2 = 0.571.

There’s no correlation between the latitude and humidity for either hemispheres with r^2 equal to 0.004, and 0.014 respectively.

There’s no correlation between the latitude and cloudiness for either hemispheres with r^2 equal to 0.011, and 0.006 respectively.

There’s no correlation between the latitude and cloudiness for either hemispheres with r^2 equal to 0.0, and 0.008 respectively.

**Requirements**

The requirements for "Part 1: WeatherPy" are the following

Create Plots to Showcase the Relationship Between Weather Variables and Latitude (30 points)

* Use the OpenWeatherMap API to retrieve weather data from the cities list generated in the started code (10 points)
* Create a scatter plot to showcase the relationship between Latitude vs. Temperature (5 points)
* Create a scatter plot to showcase the relationship between Latitude vs. Humidity (5 points)
* Create a scatter plot to showcase the relationship between Latitude vs. Cloudiness (5 points)
* Create a scatter plot to showcase the relationship between Latitude vs. Wind Speed (5 points)

Compute Linear Regression for Each Relationship (40 points)

* Linear regression scatter plot for Northern Hemisphere: Temperature (C) vs. Latitude (5 points)
* Linear regression scatter plot for Southern Hemisphere: Temperature (C) vs. Latitude (5 points)
* Linear regression scatter plot for Northern Hemisphere: Humidity (%) vs. Latitude (5 points)
* Linear regression scatter plot for Southern Hemisphere: Humidity (%) vs. Latitude (5 points)
* Linear regression scatter plot for Northern Hemisphere: Cloudiness (%) vs. Latitude (5 points)
* Linear regression scatter plot for Southern Hemisphere: Cloudiness (%) vs. Latitude (5 points)
* Linear regression scatter plot for Northern Hemisphere: Wind Speed (m/s) vs. Latitude (5 points)
* Linear regression scatter plot for Southern Hemisphere: Wind Speed (m/s) vs. Latitude (5 points)

The requirements for "Part 2: VacationPy" are the following (30 points)

* Create a map that displays a point for every city in the city\_data\_df DataFrame (5 points)
* Narrow down the city\_data\_df DataFrame to find your ideal weather condition (5 points)
* For each city in the hotel\_df DataFrame, use the Geoapify API to find the first hotel located within 10,000 metres of your coordinates (10 points)
* Add the hotel name and the country as additional information in the hover message for each city in the map. (10 points)