An analyze was conducted to see how the change of latitude affects weather. This analysis was accomplished by pulling weather statistics for over 500 cities from OpenWeatherMap API.

After gathering all the needed information and formatting it, Matplotlib was used plot various aspect of weather characteristics vs. latitude. Factors we looked at included:

* Temperature
* Cloudiness
* Wind Speed
* Humidity

This site provides the formatted source data and visualization created for the analysis, as well as explanations and descriptions of any trends and correlation observed.

Max Temp

As expected, the weather becomes significantly warmer as the cites’ latitude approaches the equator (0 Deg. Latitude). Another interesting observation is that the southern hemisphere tends to be warmer than the northern hemisphere when this analysis was performed. This may be due to the tilt of the earth at the time of the year this data was gathered.

Humidity

There doesn’t appear to be a statistically significant correlation between humidity and latitude. From the cities sampled in this analysis it can observed that there is a higher ratio of cities with higher humidity than without. There also appears to be a cluster of cities with a 100% humidity. This may be due to humidity is higher in areas of large bodies of water, and cities are generally established in areas where water is accessible.

Wind Speed

There doesn’t appear to be a statistically significant correlation between wind speed and latitude. An interesting observation is that there appears to be more cites with lower wind speeds than with higher wind speeds.

Cloudiness

There doesn’t appear to be a statistically significant correlation between cloudiness and latitude. An interesting observation from the sampled cities is that there is a cluster of cities with cloudiness of 0%, 75%, and 90%.