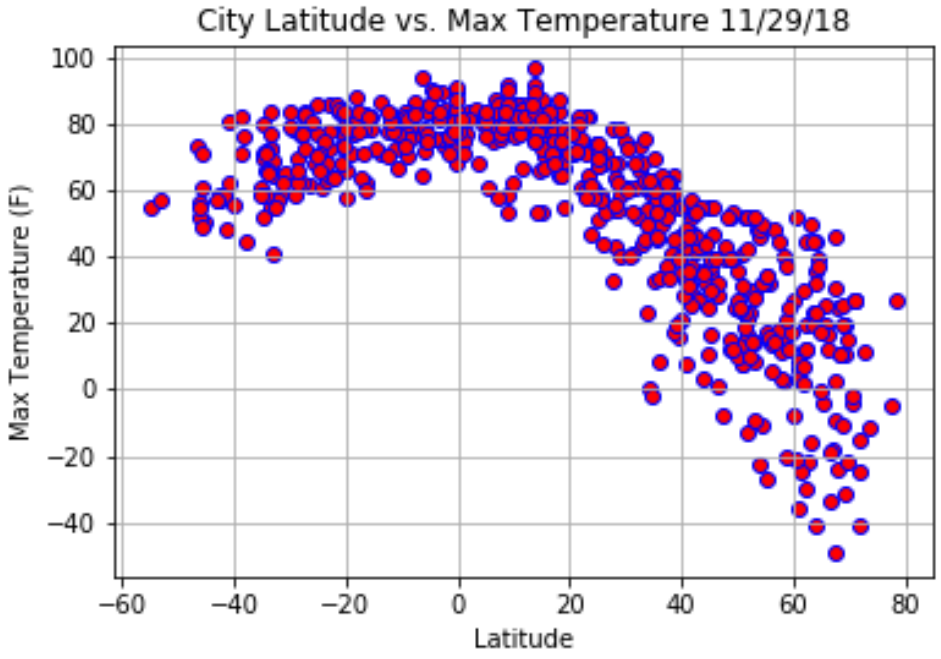
Observable Trends based on City Weather Data via the OpenWeatherMap API

This project is to create a Python script to visualize the weather of 634 cities across the world of varying distance from the equator. By utilizing a simple Python library, the OpenWeatherMap API, We have the following observations weather across world cities.

1. Temperature (F) vs. Latitude

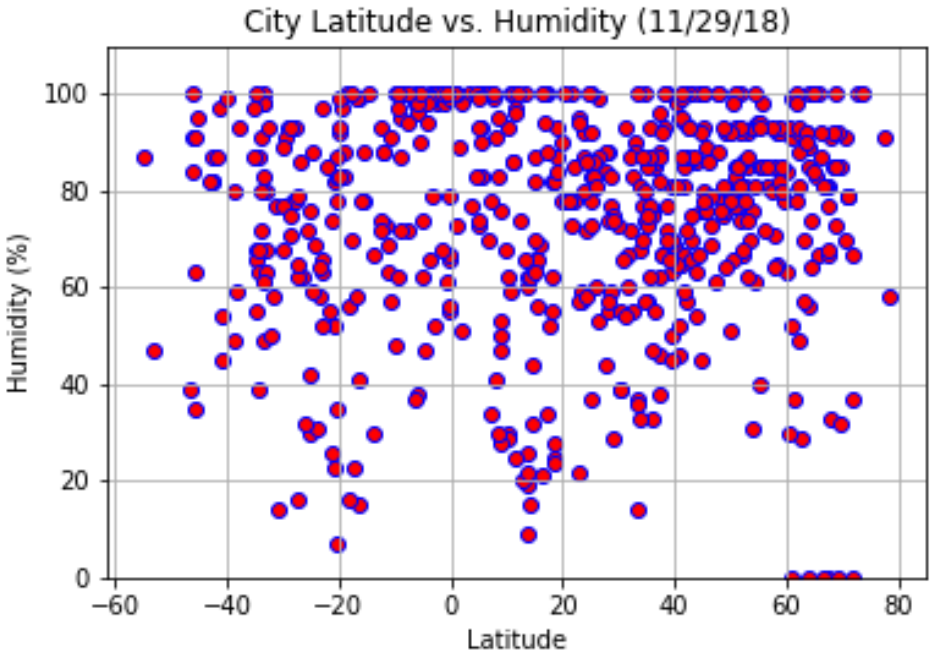
When cities' latitude is from -60 to 0, their max temperature will slowly go up to highest 100F from the lowest 40F. But when the latitude is going higher, then the max temperature will rapidly go down to -40F(Latitude is around 60~80) from 100F (Latitude is around 10)



CITY LATITUDE VS. MAX TEMPERATURE

2. Humidity (%) vs. Latitude

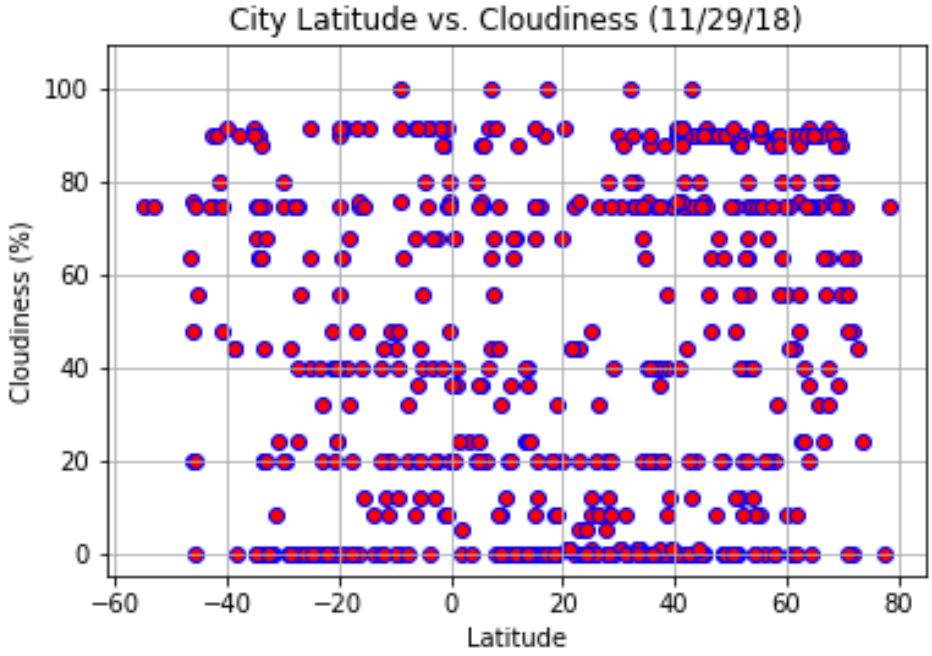
Cities' latitude is much related cities' humidity. The humidity around the 634 cities are evenly distributed. But the number of cities which has the humidity above 60% is much higher than the number of cities which has dry air and low humidity.



CITY LATITUDE VS. HUMIDITY

3. Cloudiness (%) vs. Latitude

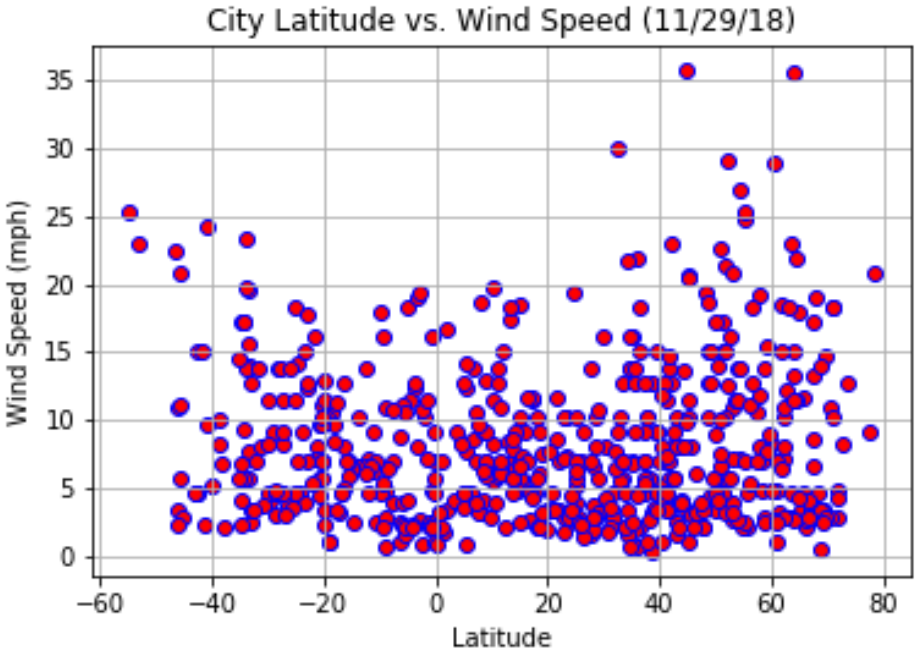
There is no obvious relationship between latitude and cloudiness. But the cloudiness' distribution is mostly divided into range between 80% -100% or 0% to 20%.



CITY LATITUDE VS. CLOUDINESS

4. Wind Speed (mph) vs. Latitude

Most cities' wind speed is below 15mph. There is no obvious relationship between latitude and wind speed.



CITY LATITUDE VS. WIND SPEED