Python API Challenge Analysis

WeatherPy

* Scatter Plots
  + Latitude vs Temp – as you move away from the equator, temperature drops at an increasing rate. The northern hemisphere gets colder than the southern hemisphere.
  + Latitude vs Humidity – our plot does not seem to illustrate a discernable pattern. However, our cities seem to be most concentrated in the high latitude and high humidity region.
  + Latitude vs Cloudiness – This plot too does not seem to show any clear pattern. Cities seem to be distributed with no trend.
  + Latitude vs Wind Speed – Wind speeds overall tend be low, with the majority of cities below 20mph. However, and outliers with above average high wind speed are at the furthest points away from the equator.
* Linear Regression
  + Northern: Temp vs Latitude – there is a clear correlation between moving further from equator and a decrease in temperature.
  + Southern: Temp vs Latitude – there is a clear, but not as strong, correlation between lower temps and moving further away from the equator.
  + Northern: Humidity vs Latitude – the correlation is not very strong, but it is positive and as you move away from the equator humidity increases.
  + Southern: Humidity vs Latitude – interestingly, in the southern hemisphere, as you move away from the equator the humidity decreases.
  + Northern: Cloudiness vs Latitude – Our cities are widely dispersed but as you move away from the equator cloudiness also increases.
  + Southern: Cloudiness vs Latitude – there is almost no correlation as the slope of the line is only 0.1.
  + Northern: Wind Speed vs Latitude – Wind speed is nearly evenly dispersed throughout the different latitudes.
  + Southern: Wind Speed vs Latitude – As latitude increases, so does the wind speed. Most cities are concentrated in the bottom left quadrant.
* Three observable trends:

1. The northern and southern hemispheres do not share identical, but opposite, pattern in the weather,
2. The northern hemisphere appears to be more humid overall.
3. Both hemispheres share closely uncorrelated relationships in cloudiness.

VacationPy