Data Analytics API Homework

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In order to better understand how weather patterns are affected by their proximity to the northern and southern polls 500 cities were randomly selected and analyzed. The cities’ latitude was recorded as well as their maximum temperature, humidity levels, as well as the cloudiness based on the day the data was pulled.

The graph labeled ‘City Latitude vs. Max Temp,’ shows a standard bell curve. This distribution pattern shows a direct correlation of cities closer to the southern and northern polls having colder weather versus those closer to the equator.

The next graph labeled ‘City Latitude vs. Humidity’, shows there is not a direct correlation between humidity and latitude. It is observable then even though there is a higher percentage of cities in the upper quartile of the humidity scale the cities are distributed evenly amongst the latitude scale.

The final graph labeled ‘City Latitude vs. Cloudiness,’ shows there is not a direct correlation between latitude and cloudiness. We can observe that most cities experience either a high level of cloudiness or a low level of cloudiness. This is proven from the clusters of cities both in the upper and lower quartiles of the cloudiness scale. The fact that there is not clustering based on Latitude shows there is no direct correlation between these two variables.

From our study we can see that there is a correlation between latitude and weather which is the maximum temperature of the city. Also, we can observe weather trends across all cities such as most cities experience either a low or a high percentage of cloudiness. The graphs also show that sometimes there are no correlations between weather and latitude such as humidity levels and cloudiness.