Weather API

This project looked at 500 random cities across the globe and their relationship with the weather and the distance from the equator. There are 4 graphs depicting the data; Temperature vs Latitude, Humidity vs Latitude, Cloudiness vs Latitude, and Wind Speed vs Latitude.

Link to weather graphs

Visualizations:

Temperature

This graph visualizes temperature and latitude. As you can see the data points are shaped in a horse shoe formation. The reason the formation took shape is due to the temperature increasing in locations that are closure to the equator. On the left side of the graph the points do not dip as low as the right, that is due to the earths rotation and locations that are negative in latitude are currently in their summer months.

Humidity

This graph visualizes humidity percentage and latitude. As you can see the top line is 100% humidity which mean it is raining. There is no correlation that could be derived from the graph between humidity and latitude.

Cloudiness

This graph visualizes the cloudiness and the latitude. As you can see there are some cities that have heavy clouds close to around 90% and some with clear skys, around 0%. In this graph you can see a decrease in cloud coverage around 20 degrees latitude.

Wind speed

This graph visualizes the cloudiness and the latitude. Most of the wind speeds measurements fall between 0 and 15 miles per hour. There is a relationship in wind speed and latitude, as the latitude increases so does the wind speed.

Overview:

The purpose of this project was to analyze how weather changes as you get closer to the equator. In order to complete this analysis an API was utilize to collect current state weather metrics. A loop iterated though the data and collected weather data on 500 random cities then brought into a data frame. After this data was inserted into tables and cleaned, a thorough assessment could be achieved.

The weather data focused on 4 metrics and their relationship with the equator. Using the data the following were plotted; Temperature vs :Latitude, Humidity vs Latitude, Cloudiness vs Latitude and Humidity vs latitude.