**WeatherPy Report**

1. **The relationship between latitude and maximum temperature differs between the hemispheres**

In the Northern hemisphere there is a strong negative correlation between latitude and max temp (model accounts for 84% of variation). As latitude increases, max temp decreases. As latitude increases in the Northern hemisphere you are getting further away from the equator. Thus, you are further away from the sun and the temperature becomes colder.

In the Southern hemisphere the opposite occurs. There is a weak positive correlation between latitude and max temp (model accounts for 44% of variation). As latitude increases, max temp slightly increases. Since latitude in the Southern hemisphere is measured in negative values, as latitude increases you are approaching the equator. Thus, you are closer to the sun and the temperature becomes warmer.

1. **As latitude increases, humidity slightly increases, but only in the Northern Hemisphere**

In the Northern hemisphere there is a weak positive correlation between latitude and max temp (model accounts for 31% of variation). This means that humidity increases as you move away from the equator in the Northern hemisphere. You would expect humidity to increase as you move away from the equator as colder air requires less moisture to become saturated and thus relative humidity tends to be higher in lower temperatures. However, the relationship is very weak. There is no correlation between latitude and max temp in the Southern hemisphere (model accounts for only 29% of variation).

A possible reason for the weak relationship in the North and lack of relationship in the South could be that the data was collected in January, which is mid-summer in the Southern hemisphere and mid-winter in the Northern hemisphere. Humidity is closely linked with temperatures, and temperatures in summer and winter tend to be consistently warm (summer) or cold (winter). There may not be as much variation in humidity across latitudes in summer and winter as there may be in spring or fall when temperatures fluctuate more frequently.

1. **There is no relationships between latitude and either cloudiness or wind speed in both hemispheres**

There is no correlation between latitude and cloudiness (North: 22%, South: 28%) or latitude and wind speed (North: 5%, South: 16%) in both hemispheres.

Cloudiness tends to be linked more to land or ocean cover, with cloudiness being higher over oceans vs. land. Since land mass and ocean coverage is not related to latitude, it makes sense that there is no relationship between latitude and cloudiness.

Wind speed is affected by a wide variety of factors such as temperature, air pressure, centripetal acceleration, and even the earth’s rotation. Since there are so many variables influencing wind speed, it is impossible to determine if latitude and wind speed are related without accounting for all these variables.