Weather API Observations

In collecting random numbers as a tuple to generate a list of latitude and longitude pairs across the globe and then feeding those into the Citipy library, it was surprising at first to see that of the 1500 pairs of random numbers, over 600 resulted in a city match. However, if we consider that the coordinates could have resulted over an ocean, a desert, or an area of sparse population without a nearby city identified in the library, it is not so surprising. The idea of depending on the presence of a definable city in this study will skew any conclusion from the data generated on weather trends based on geographic coordinates. Following this thought, of the 600 plus identifiable cities from the Citipy library, fewer were recognized by Open Weather Map API as cities with recorded data. Again, this limits the reliability of the conclusions made on the analysis of the trends like temperature based on latitude. However, the hottest recorded max temperature at the time of the study was around 30 degrees latitude. In the expected trend, the max temperatures recorded decrease towards the poles.In addition, as the latitude moves toward the North (90 degrees) and South (-90 degrees) Poles, we see few to no results for a range of latitudes. There are more data points toward the north (positive degree) pole than there is toward the south. Since there are no data points below -60, we might conclude that either there are no cites in Antarctica or the parameters of our data generation eliminated those latitudes. In this case, we can accept the former conclusion, since the only settlements on the Antarctica continent are research stations.