Analysis: JSON-API-Challenge

WeatherPy:

For this assignment, analysis was done via JSON returned API responses on weather data collected globally. Data generated in this part of analysis was used for analysis in the second half of the assignment and exported as a csv file. Cities were parsed based on latitude and longitude parameters that were randomly generated. From the randomly determined cities, items such as max temperature, humidity, cloudiness, wind speed and country of origin were appended to generate relevant data frames. Plots were generated; regarding temperature by city, a generally negative trend emerges from negative to positive latitude. No definitive correlation exists for city and humidity nor city and cloudiness (defined by visibility). Scatter plot analysis for city and wind speed show no definitive correlation either.

Further analysis was broken down by Northern and Southern hemispheres. Regression analysis of temperature reveals a fairly moderate to strong negative correlation; r^2 for Northern Hemisphere is approximately -.7982 and -.6805 for southern hemisphere. No significant difference in negative trend appears between either hemispheres and temperature.

Humidity generally seems to increase across latitude in the northern hemisphere (r^2 = .2639). No trend appears in humidity across latitude in the southern hemisphere (r^2 = .0407). cloudiness generally trends downward across latitude in both hemispheres (r^2 ~ -.3). wind speed trends slightly downward in the northern hemisphere and slightly upward across latitude in the southern hemisphere (r^2 = -.105 and .129, respectively).

VacationPy:

From “cities(1).csv”, data was cleaned for uniformity and presented in a new data frame. Based on relevant longitude and latitude, hotels for each city were parsed and appended to the data frame; these were retrieved by JSON/API endpoints as well for hotels within 5000 meters of each city. Graphs were generated to display the hotels on a heat-layered map.

This analysis is based on the initial script run. Data trends did not shift significantly depending on cities generated. Outlier data was not removed