DATA ANALYST NANODEGREE

UDACITY

PROJECT: EXPLORE WEATHER TRENDS

-PRAJEET PATIBANDLA

Summary

In this project, you will analyze local and global temperature data and compare the temperature trends where you live to overall global temperature trends.

Goals

1. Extract Data
2. Create a Line Chart Visualization
3. Make Observations

STEP1: EXTRACTION OF DATA FROM DATABASE

I Pulled the list of all cities in United States so that I can pick one city. I choose Columbus as my City

```
SELECT *
FROM city_list
WHERE country LIKE 'United States'
```

I noticed that there is a similar named column ‘avg_temp’ in both Global Data and City Data tables. So, I renamed the columns in both tables so that It will help me to join tables and pull data

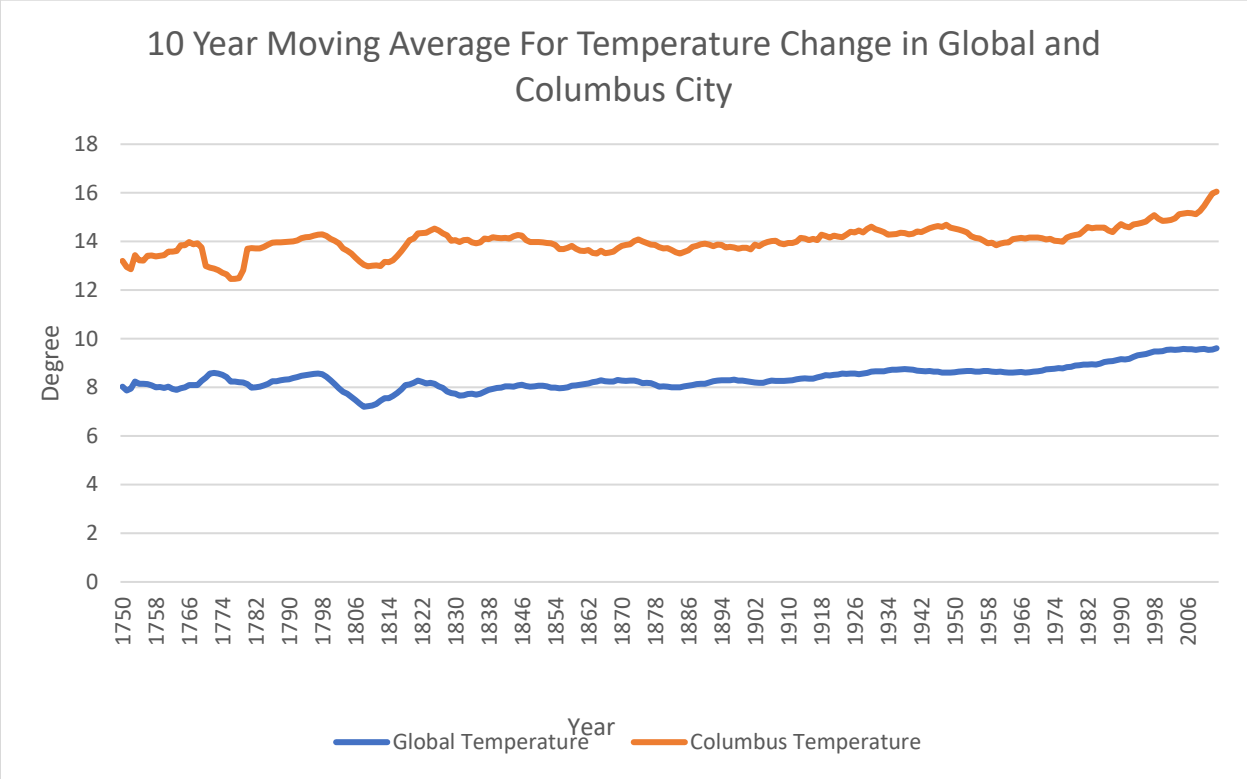
```
ALTER TABLE city_data RENAME COLUMN avg_temp to
avg_temp_city;
ALTER TABLE global_data RENAME COLUMN avg_temp to
avg_temp_global;
```

Now, finally, I extracted temperatures of Global and Columbus City by joining two tables (Global data and City data)

```
SELECT global_data.year,
global_data.avg_temp_global, city_data.avg_temp_city
FROM global_Data JOIN city_data
ON global_data.year = city_data.year
WHERE city like 'Columbus'
```

STEP2: CALCULATING MOVING AVERAGE AND CREATING LINE CHART

I used 10-year Moving Average to create a Line chart for Global Average Temperature vs Columbus City Average Temperature. I created this using Microsoft Excel



STEP3: FINING OBSERVATIONS FROM THE RESULTS

With plotting the moving average and line charts, I came to few conclusions-

1. The Global Temperatures keep increasing quiet constantly so as the Columbus Temperatures
2. The Average of Global temperatures from 1750-2000 was at 8.2 while the average for years 2001-2013 went up to 9.5 which is very high change. This implies that global temperatures have keep raising tremendously in last 10 years.
3. The Average of Columbus temperatures from 1750-2000 was at 13.92 while the average for years 2001-2013 went spiked to 15.05 which is higher than global temperatures in both cases. This implies that Columbus temperatures were always way too higher than Global temperatures.
4. Comparing with Global temperature moving average with Columbus moving average, it is in parallel with Columbus temperatures. Which implies with increasing in global temperatures, Columbus temperatures keep increasing.
5. In All, Columbus is hotter now and then.