

Explore Weather Trends

Steps:

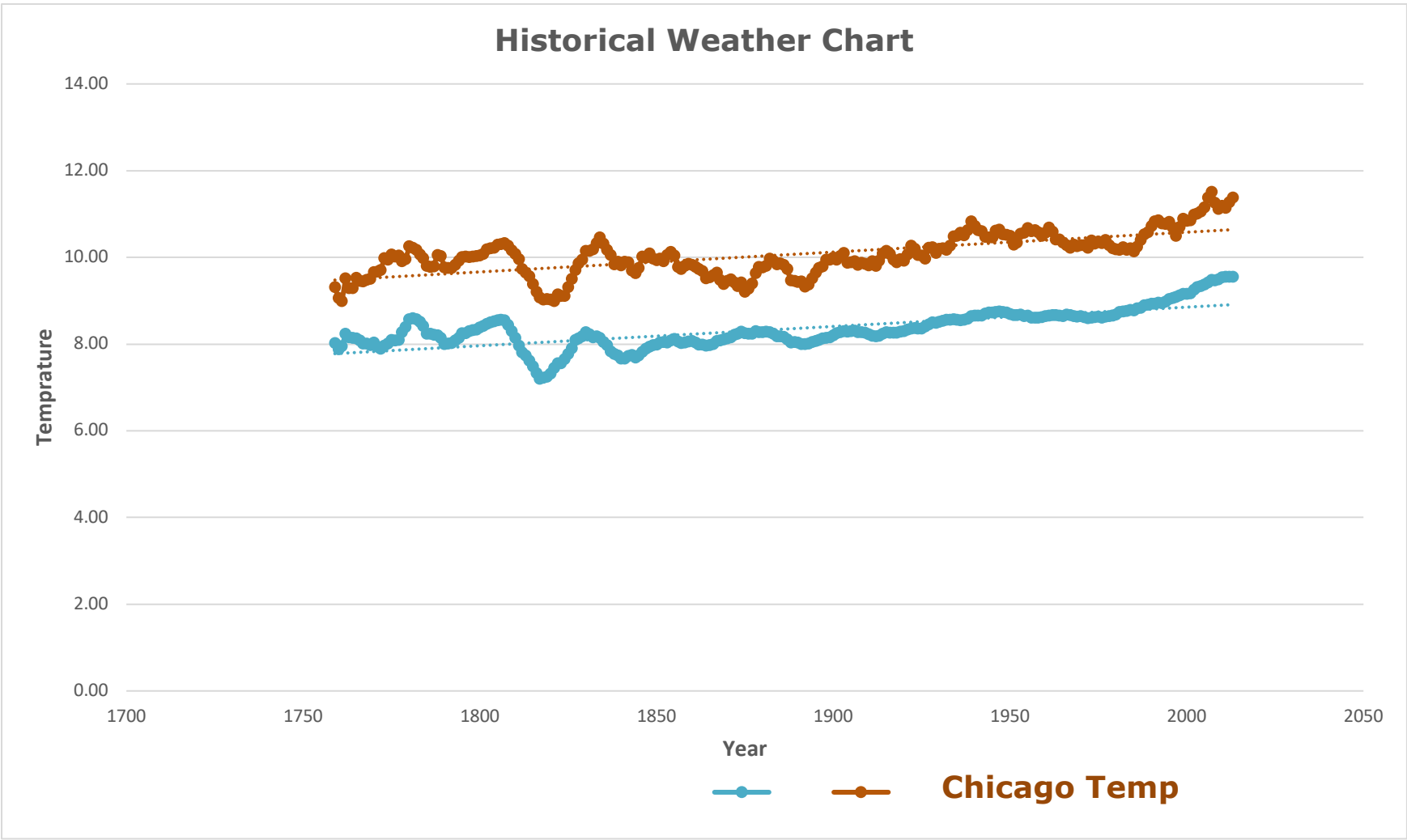
- 1- SQL Query
- 2- Downloaded the Data into Excel
- 3- Setup 10 years moving average in Excel
- 4- Plot the graph in Excel

Trends:

Both local (Chicago) and global trends shows a consistent rise in temperature over the last 250+ years. Global temperature rose by about 1.5 degree and Chicago temperature about 2 degrees during the time measured.

Chicago is densely populated city and lack of green space made the temperature rise faster than global rise in temperature.

- 1- Both global and Chicago temperature are rising and following the similar trends
- 2- There is more temperature fluctuation in Chicago temperature compare to global trend
- 3- The temperature fluctuation in Chicago is most probably due to lack of greenspace
- 4- Based on the trends the temperature rise is not noticeable in the first 150 years, but the rise is very noticeable in the last 100 years, specially during the last 50 years, temperatures have risen almost ONE degree globally
- 5- It is safe to assume that in future population centers will be more susceptible to climate change due to rise in temperature



SQL Query:

Searching for City located closet to St. Louis, MO

```
SELECT *  
FROM city_list  
WHERE country = 'United States';
```

Changing column name to easily differentiate between local and global average temperature

```
ALTER TABLE global_data RENAME COLUMN avg_temp to global_avg_temp;  
ALTER TABLE city_data RENAME COLUMN avg_temp to city_avg_temp;
```

Pulling global and local temperature averages and joining them into a table

```
SELECT global_data.year, global_data.global_avg_temp, city_avg_temp  
FROM global_data INNER JOIN city_data  
ON global_data.year=city_data.year  
WHERE city like 'Chicago';
```



WeatherData.xlsx