Data Analyst Nanodegree

UDACITY

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Explore Weather Trends

Analysis:

City	SQL commands for extracting data
To select the city in United States	SELECT * FROM city_list WHERE country = 'United States';
To select the City data (Chicago)	SELECT * FROM city_data WHERE country = 'United States' AND city = 'Chicago';
For Global Data	SELECT * FROM global_data;

Approach to get the desired data:

- I downloaded the CSV file of Chicago city and global data to get the desired data for analysis.
- I used Microsoft Excel for the analysis.

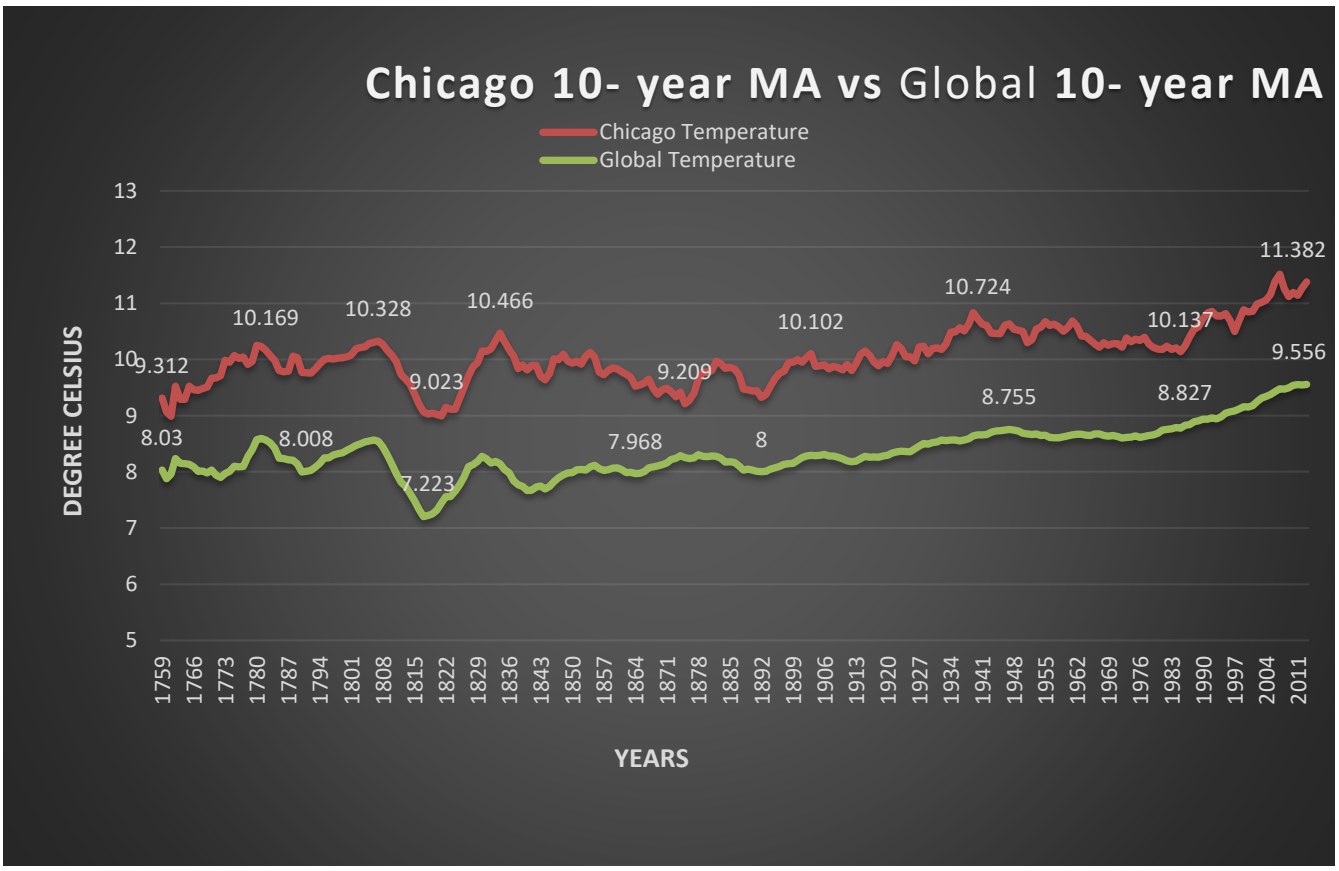
Moving Averages:

- To observe the trends in temperature I calculated Moving Average (MA).
- I used 10 years Moving Average to get the smooth line chart.

EXCEL Commands for Moving Averages:

For 10 years Moving Average =AVERAGE (B2:B11)

Line Chart for Chicago and Global Temperature:



Observation:

- **Global** average temperature varies between **8.03 to 9.556** degree Celsius, but **Chicago** city average temperature varies between **9.312 to 11.382** degree Celsius.
- On comparing the Global average temperature and Chicago city average temperature it can be clearly seen that **Chicago city is hotter** than Global average temperature.
- Change in temperature over time:

Year	Change in Global Average Temperature	Change in Chicago Average Temperature	Increasing/Decreasing Over time
1759-1782	8.03-8.568	9.312-10.169	Increasing
1782-1807	8.568-8.544	10.169-10.328	Increasing
1807-1820	8.544-7.322	10.328-9.023	Decreasing

- The overall trend represents a gradual increase in the average temperature of Chicago city and as well as at the global level.

- According to the graph, the **world is getting hotter.**
- As per the graph and the table above the difference between the Global average temperature and Chicago city average temperature has been **consistent over time**.

Final Conclusion:

The World is getting hotter.