**PROJECT: Exploring Weather Trends**

**Summary**: In this Project, I will analyze the Chicago and Global temperature data and compare

the temperature trends of Chicago city to overall global temperature trends.

Steps Involved in completing this project:

1. Extract the data into csv file from given tables city\_data, city\_list, global\_data using SQL statements and open them in excel file to perform operations.
2. Calculating Moving averages for temperatures in both city data and global data
3. Creating a line chart to show the comparison between the global temperature and city temperature.
4. Based the line chart created, observations are made which shows similarities and differences between temperatures.

By

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1. **Extracting Data:**

In the project workspace, we have given tables **city\_data, city\_list, global\_data**.

We extract the tables into csv format and will open in excel to perform operations.

City\_data: year, city, country, avg\_temp

City\_list: city, country

Global\_data: year, avg\_temp

**SQL statements**:

**select \* from city\_data where city =’Chicago’ AND country =’United States’;**

The above statement will extract the ‘Chicago’ city data with avg\_temp.

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**select \* from global\_data;**

The above statement will extract the global avg temperatures.

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1. **Calculating Moving Averages:**

Moving averages are used to smooth out data to make it easier to observe long term trends and not get lost in daily fluctuations.

In this project, we are calculating 7 days moving average for the city data avg\_temp and global data avg\_temp.

We will use the function = Average(x:y) which will place in new column next to avg\_temp in 8th row.

X = avg\_temp value starting day

Y = avg\_temp value 7th  day

City\_data with moving averages:

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Global\_data with moving averages:

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1. **Creating Line chart to compare city and global temperatures:**

I have created a new excel sheet with year column, moving averages of both city and global temperatures and created line chart.

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**Line Chart:**

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1. **Observations:**

* Chicago city is hotter on average when compared to the global temperatures.
* The difference between the city and global temperatures are consistent with little fluctuations over the period of time.
* Both the Chicago city and global temperatures averages have parallel increase in temperatures over the period of time.
* Overall, the world is getting hotter and hotter and so as the city Chicago.