DATA ANALYST NANODEGREE

Explore Weather Trends

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Project 1

Extraction of Data from the DB:

1. To check which countries and cities are available in DB

```
SELECT *
FROM city_list
WHERE Country ='Saudi Arabia ' AND City = 'Riyadh';
```

2. 1 wrote the SQL query to extract temperature data for the Global and Riyadh city from the Database.

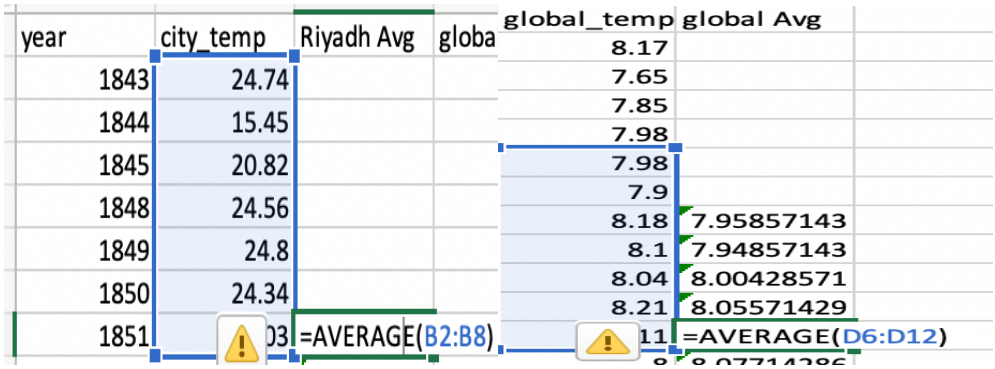
```
SELECT cd.year, cd.avg_temp city_temp, gd.avg_temp  global_temp
FROM global_data gd,city_data cd
WHERE gd.year = cd.year
AND NOT cd.avg_temp IS NULL
AND cd.city = 'Riyadh';
```

Moving Averages:

1. To smooth the data and to observe trends in the temperature.

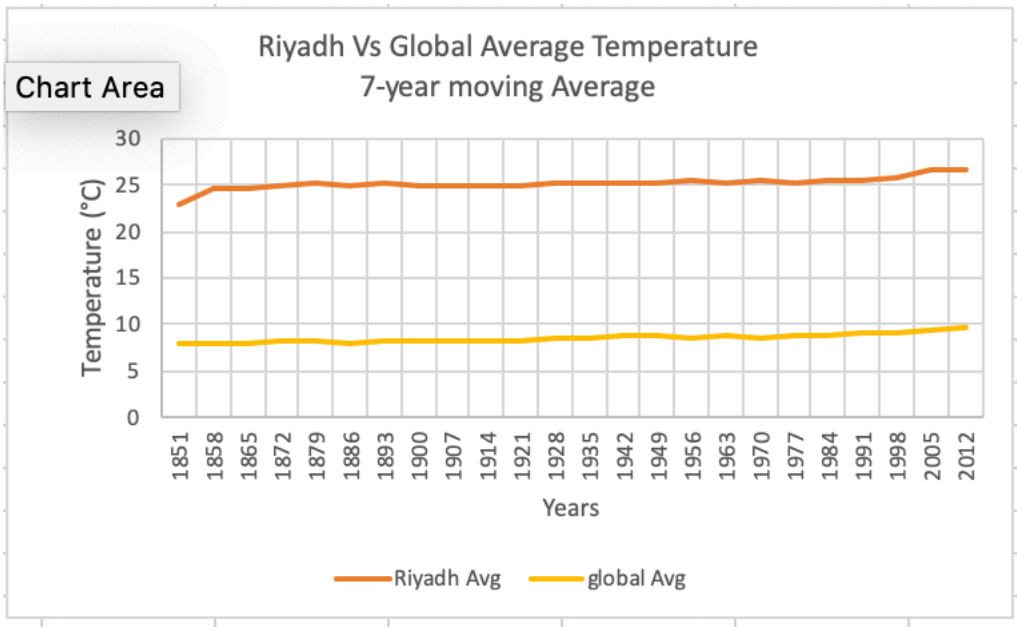
2. I have done 7 year Moving Average to get the smooth line chart.

3. I used a command =AVERAGE(A2:A8) to see the Moving Average Value for 7 years.



Then, I used Excel software to create "7-year moving average" line charts:

I have combined both Global Average Temperature and Riyadh with 7-year MA



Observations:

1- The chart shows the average temp of Riyadh city is hotter than the average temp of the Global.

2- As we can see, the Riyadh temp from 1858 to 1984 has not been changed. Obviously, the chart shows the same temp.

3- From 1851 to 2012, the chart has been indicated that a global temperature has been increased from 8 to 9 °C

4- The chart indicates an obvious increase in the average temperature of the Global starting from 1998 to 2012.

5- The chart points out that the temperature of Riyadh city increased significantly from 1851 to1858.