

#Project 1.

Exploring Weather Trends

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This project will analyze local and global temperatures data, then compare the places where I live in to overall global temperature trend's.

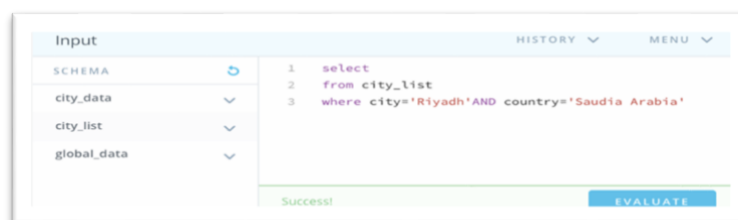
To start that, I wrote an SQL query to retrieve the cities in Saudi Arabia.

Accordingly, two cities appear which are Riyadh and Mecca.

Since I live in Riyadh, I directly choose it as the local city to be compared with global data.

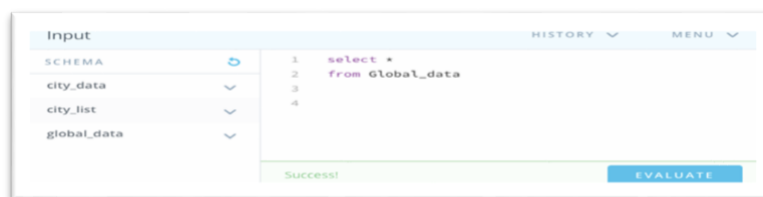
EXTRACT THE DATA:

Extracting all the temperature data for Riyadh city by using SQL query as follows:



This will return 170 result in total from 1843 to 2013

Similarly, I used SQL query to extract global data as follows:



This is will return 266 results from year 1750 to 2015

DATA SELECTION & MANIPULATION:

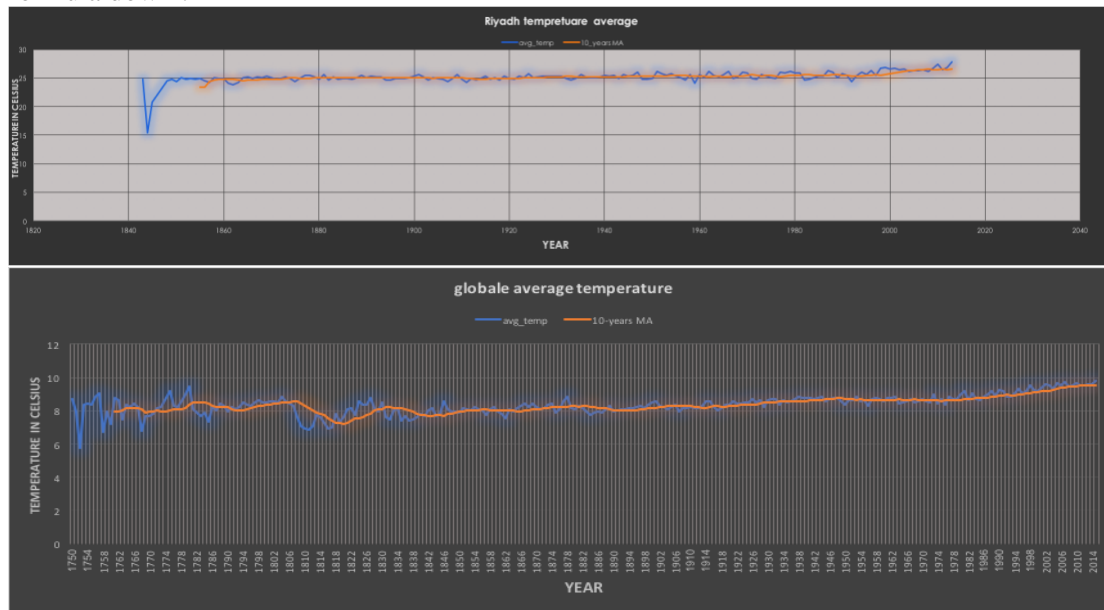
All previous data has been extracted as CSV files and imported to Excel.

In order to provide more accurate and useful data set comparison, I proceeded with choosing the range of common years only (1843 – 2013).

The best way to evaluate the data is considering the moving average to provide smother result during data visualization.

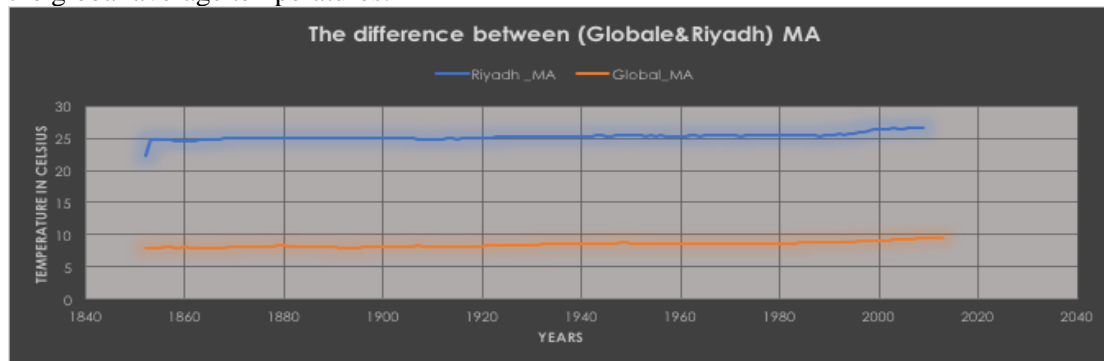
The moving average has been prepared on the same excel spread sheet on 10-years basis.

This is done by calculating the average temperatures for the first 10 years, then I dragged the formula down .



DATA VISUALIZATION:

The figure below shows a comparison between the average temperatures in Riyadh city and the global average temperatures:



OBSERVATION:

According to the line chart the following observation may be deduced:

1. Riyadh city average temperature for 10 years moving average varies between 18.4 to 26.4 degree.
2. Global average temperature for 10 years moving average varies between 8.5 to 9.5 degree.
3. The difference between year 1800-2010 is more than 3 degree in the global average chart.
4. I observed global temperature is increasing from 1750 to 2014 .
5. I observed the temperature of both Global and Riyadh average temperature are ups and downs during the earlier years , later during 1996 to 2013 both temperature are increased .
6. Since 1975 the temperatures are rising with out any stops .
7. The change of climate between the global and Riyadh city is slightly small , and both of them are rising .
8. Riyadh weather is much hotter than the global average temperature.
9. When we comparing between Riyadh temperature trend's and Global temperature trend's, we notice that there exist variance in the line chart
10. Both graphs shows increasing in average temperature with time.
11. Also, the trend has been consistent over the last few hundred years.
12. Based on the trend's above, the world is getting hotter by years due to climate change.

