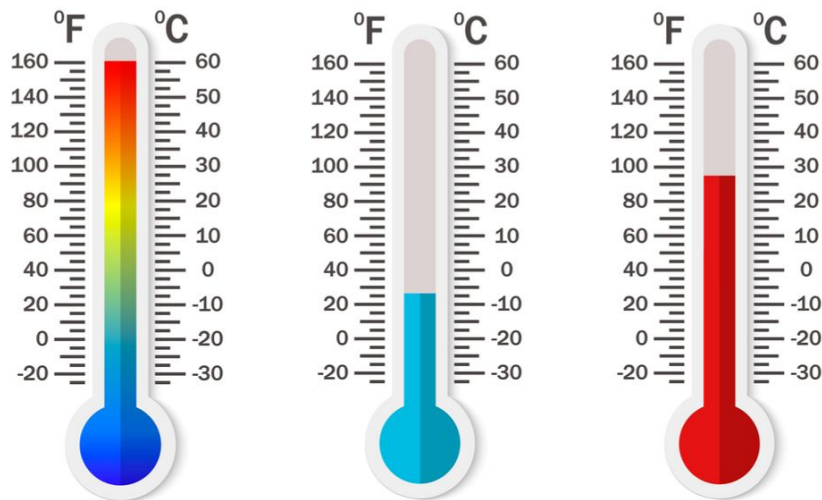


# Exploring Weather Trends



Abdulaziz Abdullah Alghamdi  
2021 – Data Analyst

# introduction

In this project, I will compare the temperatures of my city (Riyadh) from 1848 to 2013 compared to the global temperature.

firstly I extracted data from database by sql And then export the data in file CSV , Then I did an Excel analysis of the data by creating a graph comparing the temperatures .

## Query

I used this query to extract Global data

```
SELECT *  
FROM global_data ;
```

I used this query to extract data for my city

```
SELECT *  
FROM city_data  
WHERE city='Riyadh' ;
```

After extracting the data, it was exported in CSV And upload it in Excel

## **Moving Average**

Now, after extracting the data, I will calculate the average temperatures in my city and world scores to make it easier to display the data in the chart and make it easier to observe trends.

I'm going to calculate the average temperatures from 1848 to 2013.

That is, if I had data for 165 years, I would calculate the average global and local temperatures

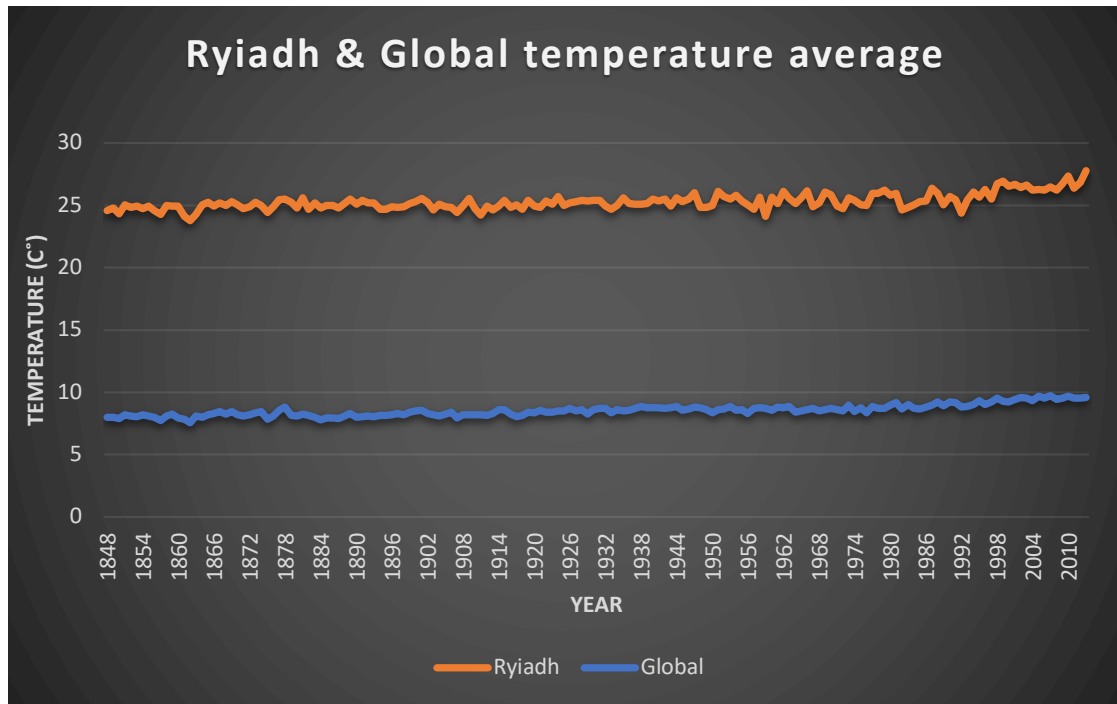
Method of calculating the average by adding the temperatures for all years, then dividing the total number "165"

Average calculation method in Excel using the command,  
= average (specify the city column and global scores column)

The result was produced this way

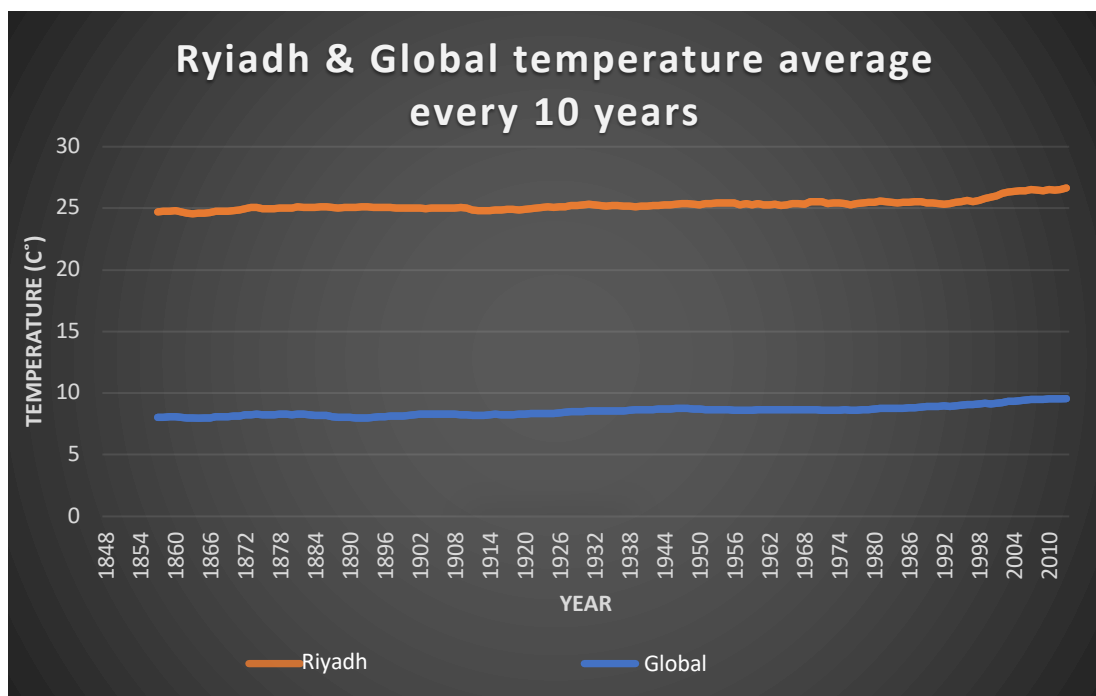
= Medium (B2: C167)

And draw up a graph to show temperature fluctuations

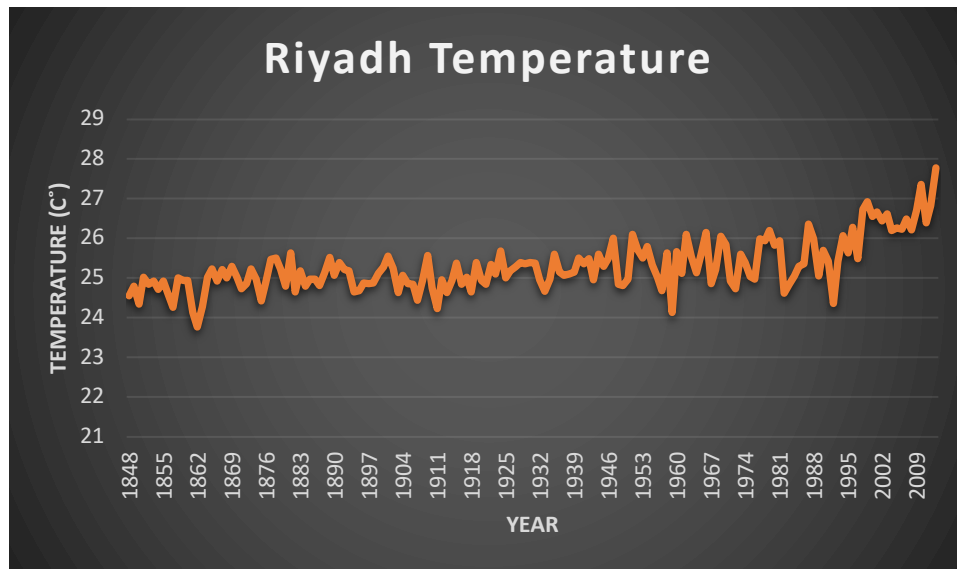


Average = 16.93 C°

I think the previous chart is very choppy and not showing results clearly. I used a 10-year moving average to make the data easier to read and compare the long-term weather smoothly and more clearly.

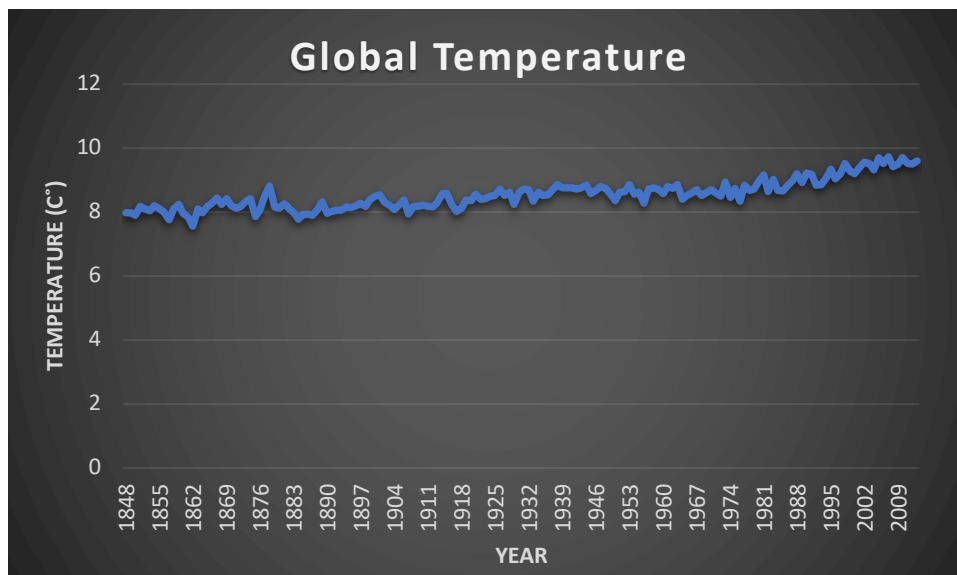


temperature chart of my city " Riyadh "



Average = 25.3 C°

temperature chart of Global



Average = 8.6 C°

## Observation

- I notice that the city of Riyadh is hotter than average global temperatures .
- In 1862, the lowest average reached was, the city of Riyadh = 23.77 and the global temperature = 7.56.
- Since 1992, temperatures have started to rise significantly and this is indicative of climate change.
- The annual global temperature difference is fairly close, but it is more fluctuating in Riyadh.
- In the graph It shows a big temperature difference between Riyadh and global.
- Finally, Riyadh is considered a hotter city than the global . and Temperatures in recent years are still rising over time .