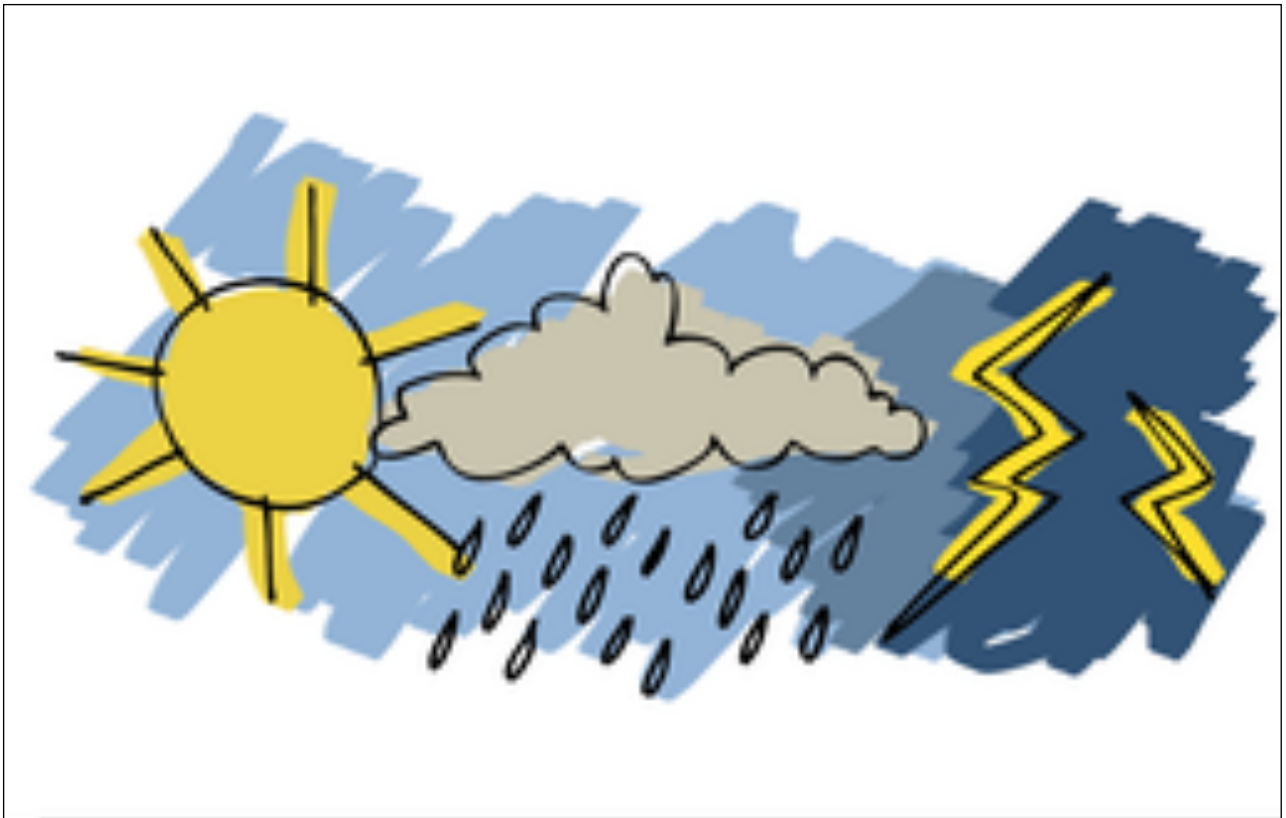

Explore Weather Trends

Data Analyst Nanodegree Program

Sarah Alharbi - 29 April 2020



Tools:

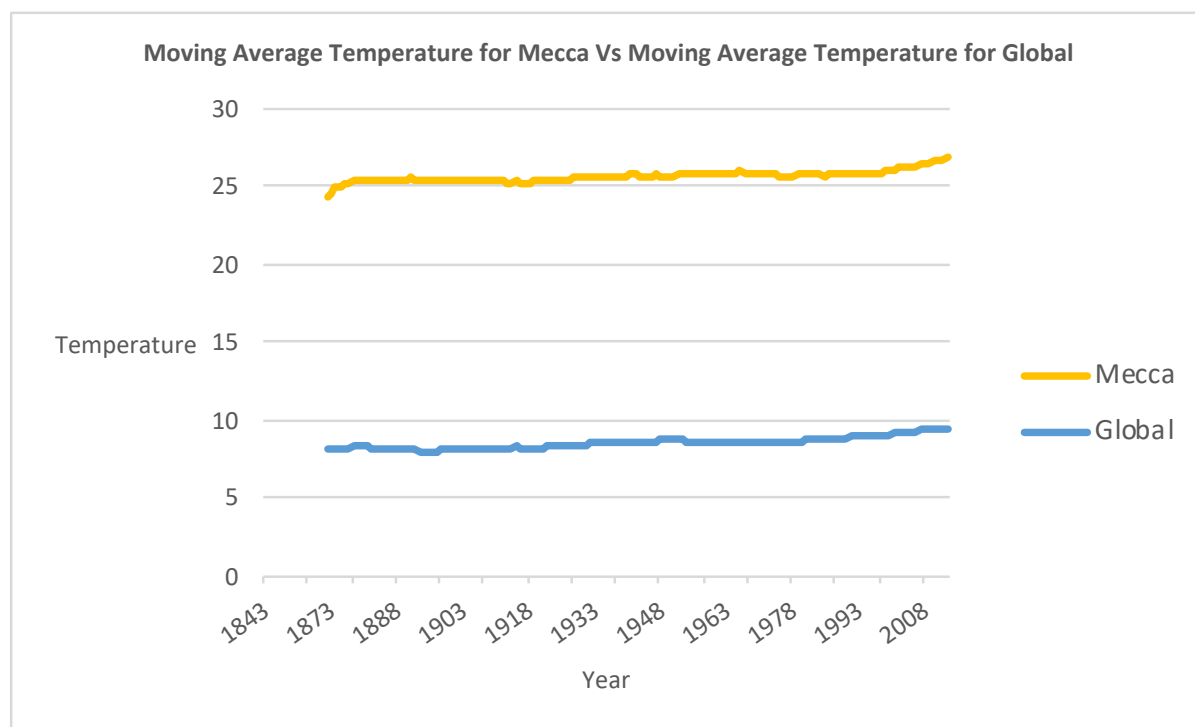
- SQL - To extract data from the temperatures database using the command below.

```
select cd.city,cd.country,cd.year, cd.avg_temp cat,  
gd.avg_temp gat  
from global_data gd  
join city_data cd  
on gd.year = cd.year  
where city like 'Mecc%'
```

- Excel sheet - To calculate moving average of Mecca city and global temperature.

I used moving average to smooth out data to make it easier to observe long term trends. I tried MA for 10 years and for 15 years, I found 15 years in the moving average making more smoothly trend. I added two new columns one for Mecca moving average and the second one is for global moving average using AVERAGE function. For instance, =AVERAGE(D2:D16).

Line chart:



Observations:

- Overall, it's clear to notice that both of the global's average and Mecca's average are increasing continuously year by year.
- It's an obvious that the average temperatures in Mecca city is higher than the average temperatures in the global, that's mean Mecca is hotter than compared to the global average.
- There is a significant difference between Mecca's temperature and global's temperature.
- Global average temperature is between nearly 8 to 9.5, on the other hand, Mecca average temperature is between 22.2 to 26.8.