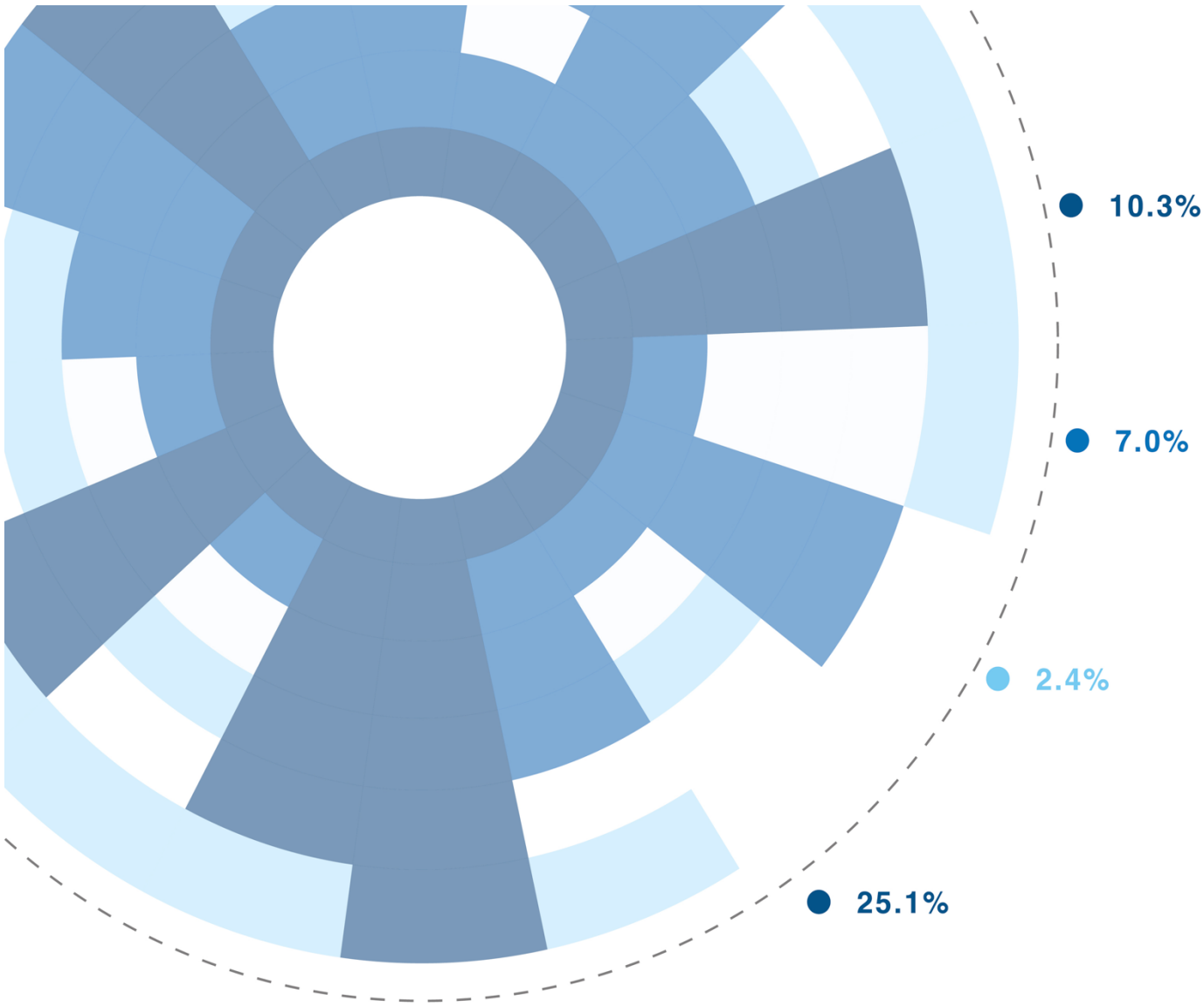


- Explore Weather Trends -

Jawaher Y. AlDamegh

Content

The goal of this project is:

Create a visualization and prepare a write up describing the similarities and differences between global temperature trends and temperature trends in Riyadh.[1]

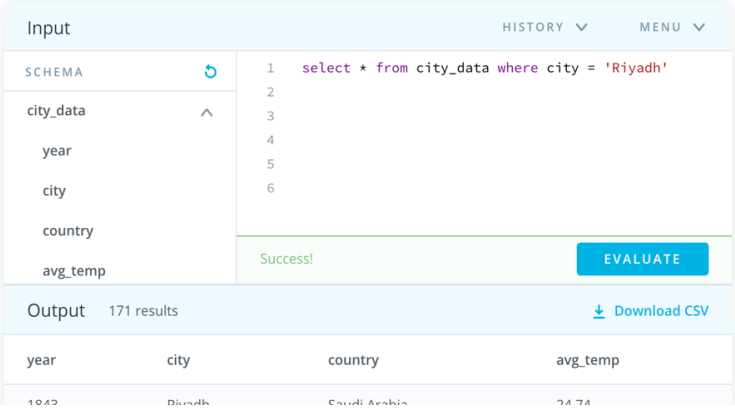
Tool used:

SQL and Excel.

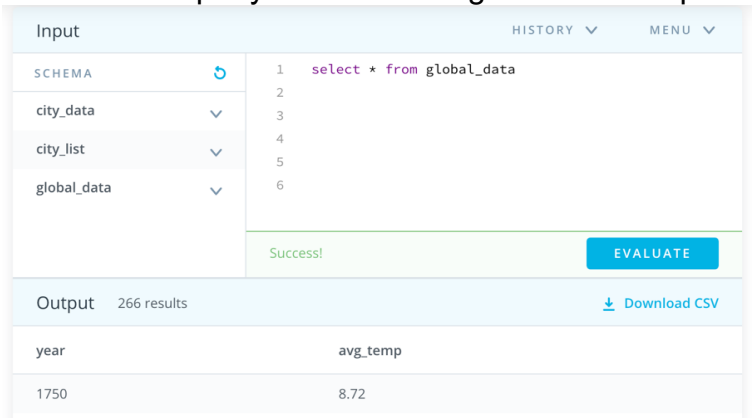
1- Extract the data

I extract the data from the database using some SQL queries:

A. Write a SQL query to extract the city level data. Export to CSV.



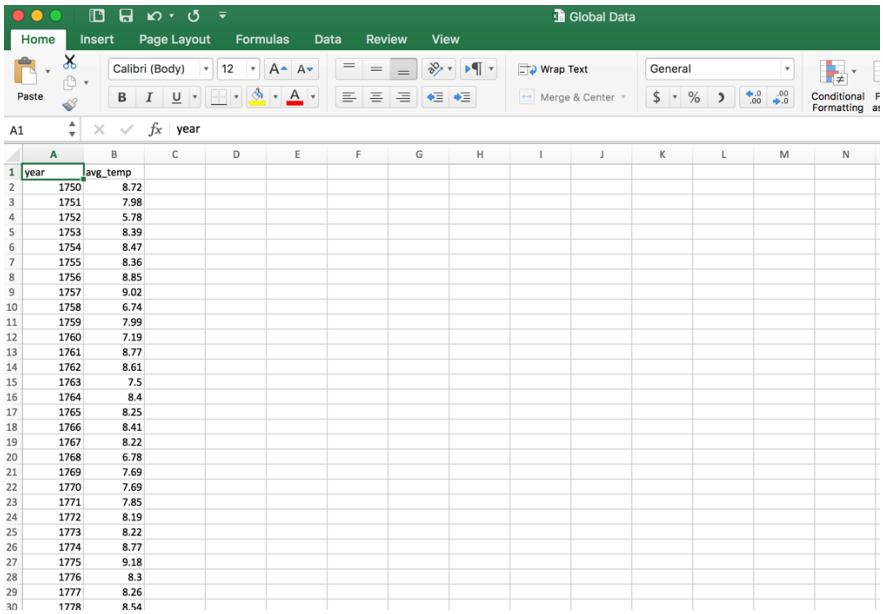
B. Write a SQL query to extract the global data. Export to CSV.



[1] From: https://classroom.udacity.com/nanodegrees/nd002-mena-connect/parts/cdcca0c9-b590-4137-ba32-ecd722286c30/modules/151259a5-f561-4be1-bc40-cc8a02ba0f7a/lessons/cbe28638-a908-4125-85aa-bd026dc1b41c/concepts/7792fbaa-7f3d-46f1-b6fb-e5f65ce35796

2- Open up the CSV

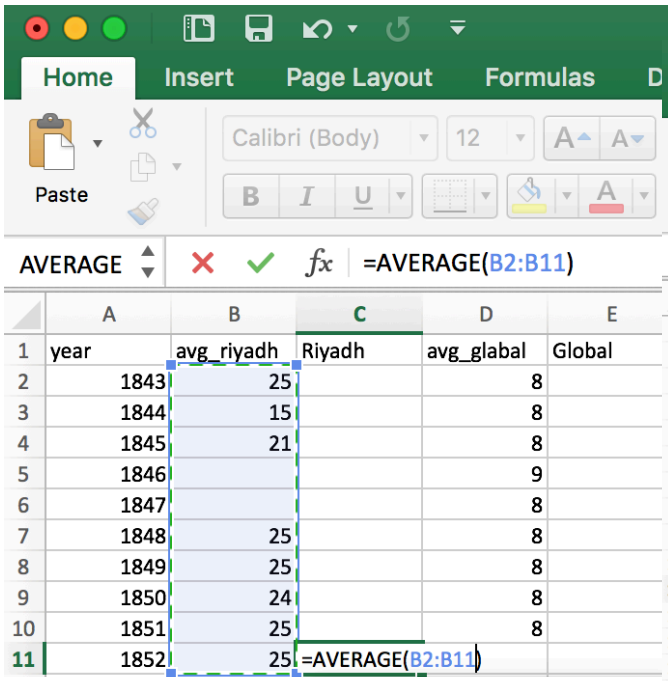
I download the files (City and Global) data that I will work on it, and open it to start working in this files by using excel tool:



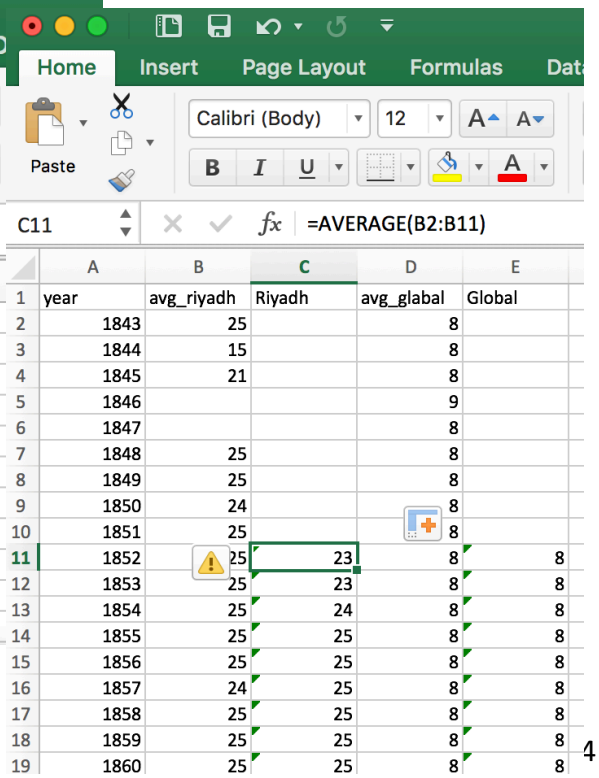
year	avg_temp
1750	8.72
1751	7.98
1752	5.78
1753	8.39
1754	8.47
1755	8.36
1756	8.85
1757	9.02
1758	6.74
1759	7.99
1760	7.19
1761	8.77
1762	8.61
1763	7.5
1764	8.4
1765	8.25
1766	8.41
1767	8.22
1768	6.78
1769	7.69
1770	7.69
1771	7.85
1772	8.19
1773	8.22
1774	8.77
1775	9.18
1776	8.3
1777	8.26
1778	8.54

I merged the two sheets in one file and start working on (Moving Average).

3- Create a line chart

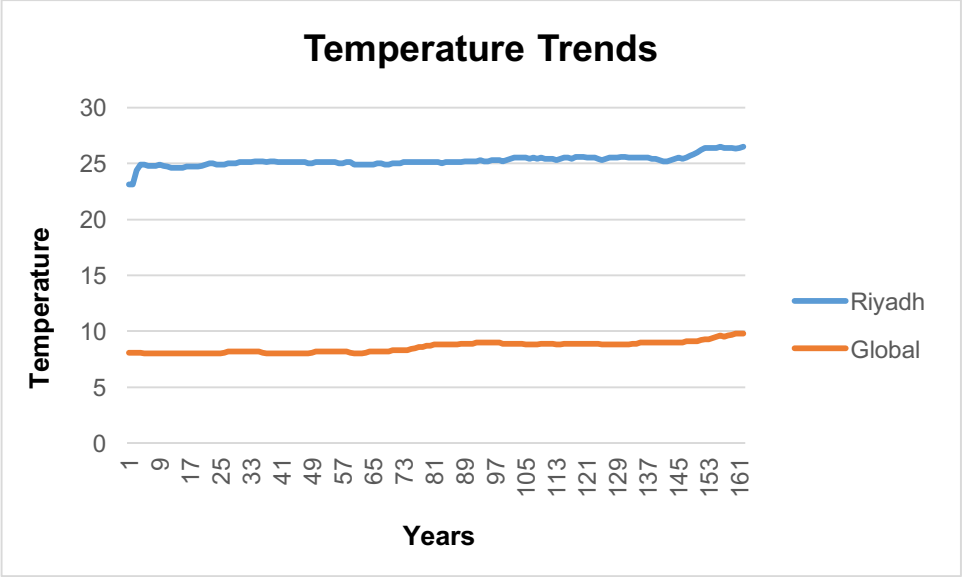


	A	B	C	D	E
1	year	avg_riyadh	Riyadh	avg_glabal	Global
2	1843	25		8	
3	1844	15		8	
4	1845	21		8	
5	1846			9	
6	1847			8	
7	1848	25		8	
8	1849	25		8	
9	1850	24		8	
10	1851	25		8	
11	1852	25	=AVERAGE(B2:B11)		



	A	B	C	D	E
1	year	avg_riyadh	Riyadh	avg_glabal	Global
2	1843	25		8	
3	1844	15		8	
4	1845	21		8	
5	1846			9	
6	1847			8	
7	1848	25		8	
8	1849	25		8	
9	1850	24		8	
10	1851	25		8	
11	1852	25	23	8	8
12	1853	25	23	8	8
13	1854	25	24	8	8
14	1855	25	25	8	8
15	1856	25	25	8	8
16	1857	24	25	8	8
17	1858	25	25	8	8
18	1859	25	25	8	8
19	1860	25	25	8	8

then I apply the (Moving Average) to all down cells.
Now, we compare the city's temperatures with the global temperatures by creating a line chart:



As we can see in the above chart the vertical value shows the temperatures and the horizontal value shows the average of 9-Years.

4- Observations

As shown in the chart above:

1- Riyadh compared with the global temperature it always hotter.
2- In general, the temperatures are rising due to the global warming.
3- The temperature in both Global and Riyadh becoming hotter over time.
4- Riyadh temperature and Global temperature are change a little over time (there are no significant change).
5- A sadden increase in Riyadh temperature emerge in the first 9 years.
6- Riyadh higher than the Global average in around a 150%.