



Project 1 : Explore weather Trends

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The tools did you use for each step:

I was used [SQL](#) to extract data from the database, was used to [EXCEL](#) to calculate the moving average, and use [Tableau](#) to make the line chart.

SQL query used are:

[Select](#) city_data.avg_temp as avg_temp_riyadh , global_data.avg_temp
as avg_temp_global ,city_data.year, global_data.year

[From](#) global_data join city_data [on](#) global_data.Year=city_data.Year

[Where](#) city_data.city like'Riyadh'

[And](#) city_data.year>=1910 [And](#) global_data.year<=2013

Input		HISTORY ▾	MENU ▾
SCHEMA	↻	<pre>1 Select city_data.avg_temp as avg_temp_riyadh , 2 global_data.avg_temp 3 as avg_temp_global ,city_data.year, global_data.year 4 From global_data join city_data on 5 global_data.Year=city_data.Year 6 Where city_data.city like'Riyadh' 7 And city_data.year>=1910 And global_data.year<=2013</pre>	
city_data	▾		
city_list	▾		
global_data	▾		
		Success!	EVALUATE
Output		104 results	
		Download CSV	
avg_temp_riyadh	avg_temp_global	year	
24.75	8.22	1910	
24.24	8.18	1911	
24.96	8.17	1912	
24.63	8.30	1913	
24.94	8.59	1914	
25.38	8.59	1915	
24.85	8.23	1916	
...	

I write this is query because I want to get all the information Temperature for from a Riyadh City and the global Cities.

How did you calculate moving average?

I calculated the moving average of 10 years by using the command

=average(a2:a10) ,=average(b2:b10) and then dragging down till the last value.

For tow columns : avg_temp_riyadh and avg_temp_global

New columns : Mov_avg_R and Mov_avg_g

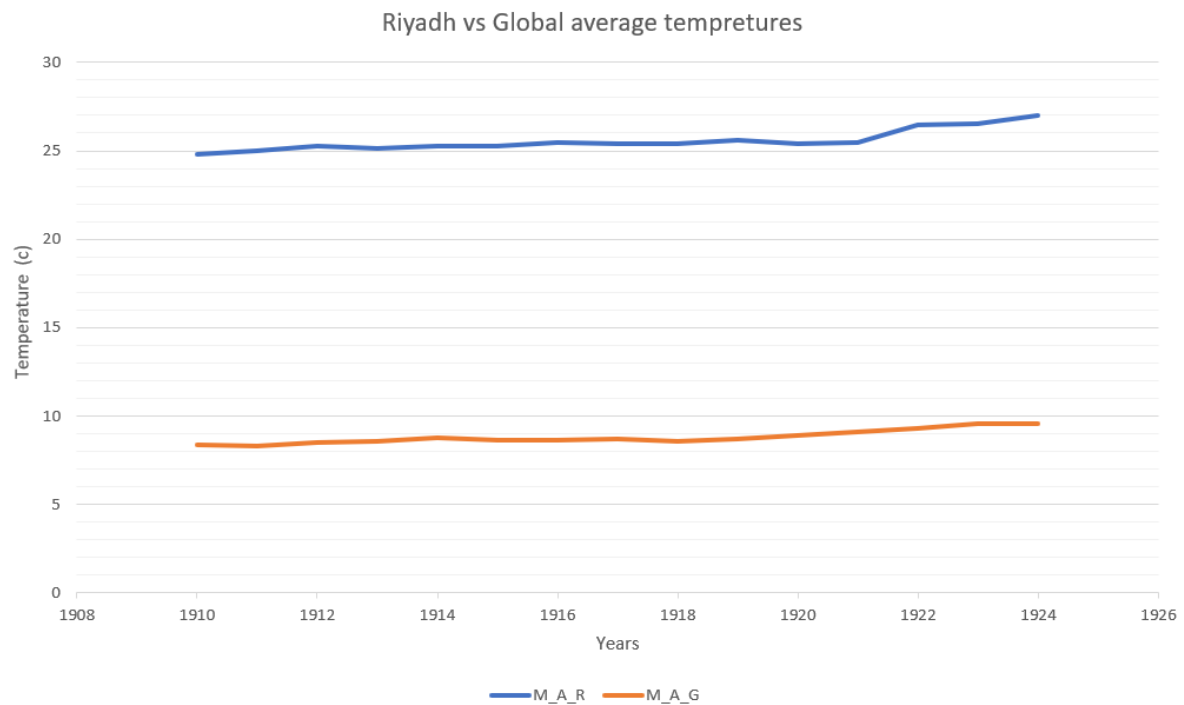
/

F	E	D	C	B	A	
M_A_G	M_A_R	year	year	avg_temp_global	avg_temp_riyadh	1
8.341666667	24.81666667	1910	1910	8.22	24.75	2
8.3	25.00857143	1911	1911	8.18	24.24	3
8.511428571	25.28857143	1912	1912	8.17	24.96	4
8.585714286	25.16142857	1913	1913	8.3	24.63	5
8.762857143	25.24	1914	1914	8.59	24.94	6
8.66	25.29142857	1915	1915	8.59	25.38	7
8.62	25.45285714	1916	1916	8.23	24.85	8
8.67875	25.3675	1917	1917	8.02	25.03	9
8.602857143	25.4	1918	1918	8.13	24.66	10
8.682857143	25.59285714	1919	1919	8.38	25.39	11
8.87375	25.41625	1920	1920	8.36	24.94	12
9.07875	25.46	1921	1921	8.57	24.84	13
9.318571429	26.44	1922	1922	8.41	25.35	14
9.55625	26.51375	1923	1923	8.42	25.1	15
9.546666667	27.00333333	1924	1924	8.51	25.69	16
		1925	1925	8.53	25	17
		1926	1926	8.73	25.19	18
		1927	1927	8.52	25.29	19
		1928	1928	8.63	25.39	20
		1929	1929	8.24	25.36	21
		1930	1930	8.63	25.39	22
		1931	1931	8.72	25.38	23
		1932	1932	8.71	24.96	24
		1933	1933	8.34	24.67	25
		1934	1934	8.63	24.97	26
		1935	1935	8.52	25.61	27
		1936	1936	8.55	25.15	28
		1937	1937	8.7	25.08	29
		1938	1938	8.86	25.11	30

What were your key considerations when deciding how to visualize the trends ?

My key consideration was to observe an increase or decrease in moving average temperature

Choosing the number 7 for waiting average it will leads to less noise in the graph and shows the important details in the graph



OBSERVATIONS:

Here are some observed between the global and local moving average temperature data:

- The temperature in Riyadh avg is higher than the average global Temperature.
- Riyadh and the global avg temperature, have been increasing over the years.
- In the city of Riyadh in the earlier years, it had a cooler average Temperature.
- Recent years, my city is different, and it is hotter, while the mean global temperature is moderate.
- The temperature in middle age is considered fluctuating in my city and the world.