

Explore Weather Trends

Project 1 : Explore Weather Trends Riyadh ,Saudi Arabia

- What tools did you use for each step?
 - (SQL) : used Extract data from DB .
 - (Excel) : used to calculate the moving average .
- Extract data from a database using a SQL query

The screenshot shows a SQL query interface with an 'Input' section on the left and a 'Query' editor on the right. The 'Input' section lists 'SCHEMA', 'city_data', 'city_list', and 'global_data'. The 'Query' editor contains the following SQL query:

```
1 select city_data.year ,
2 city_data.avg_temp as local_avg_temp ,
3 global_data.avg_temp as global_avg_temp
4 from city_data join global_data
5 on city_data.year=global_data.year
6 where city_data.city ='Riyadh' and city_data.year
7 between 1856 and 2009
```

Below the query editor, there is a 'Success!' message and an 'EVALUATE' button. The 'Output' section shows 154 results, with a 'Download CSV' button. The output table has the following columns: 'year', 'local_avg_temp', and 'global_avg_temp'. The first two rows of data are:

year	local_avg_temp	global_avg_temp
1856	24.57	8.00
1857	24.26	7.76

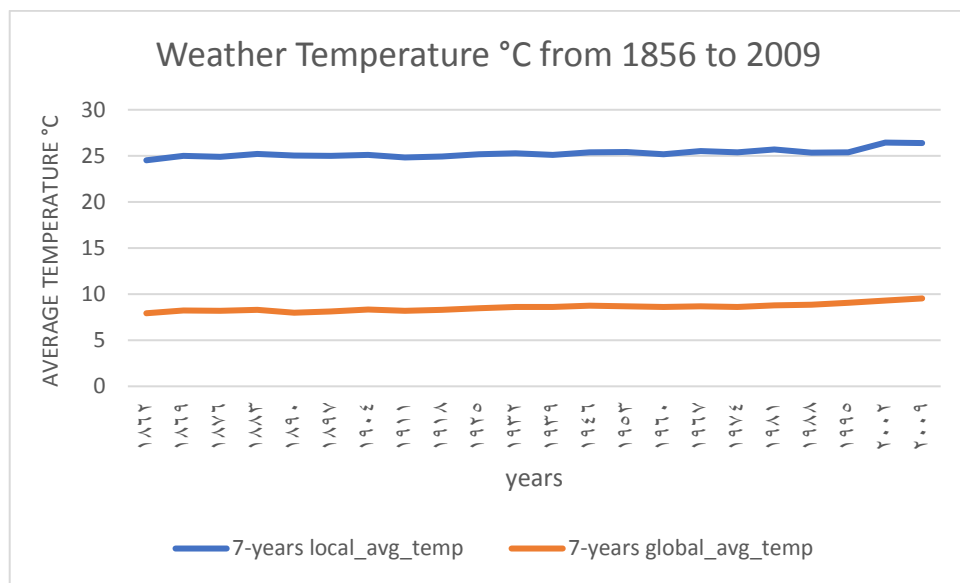
- How did you calculate the moving average?
 - I calculated the moving average of 7 years by using the command = [AVERAGE\(B2:B8\)](#) .

The screenshot shows an Excel spreadsheet with the following data:

	A	B	C	D	E	F
1	year	local_avg_temp	7-years local_avg_temp	global_avg_temp	7-years global_avg_temp	
8	1862	23.77	24.51857143	7.56	7.925714286	
15	1869	25.3	24.99714286	8.43	8.24	

The formula bar shows the formula for cell C8: `=AVERAGE(B2:B8)`.

- What were your key considerations when deciding how to visualize the trends?
 - my key considerations was to observe an increase and decrease in moving average Temperature . i have combined both Global Average Temperature and Riyadh with 7 years .
- Line chart **with local and global temperature trends**



- At least **four observations** about the similarities and/or differences in the trends
 - Global Average Temperature for 7-years varies between 7.91 °C to 9.54 °C .
 - Riyadh city Average Temperature for 7- years varies between 24.50 °C to 26.44 °C
 - Average Temperature Riyadh is hotter than Global average Temperature .
 - Both local average Temperature and global average Temperature have increasing every end of sever years.
 - the chart of Riyadh vs global has big difference in Temperatures.