

Explore Weather Trends

- **Steps to Extract Data**

1. Go to previous section database
2. Export temperature data for the world & the closest big city to where you live
3. You can find a list of cities and countries in the city_list table
4. Write a SQL query to extract the city level data
5. Write a SQL query to extract the global data
6. Export all to CSV

Used queries:

1. `SELECT * FROM city_list WHERE country='Saudi Arabia';`
2. `SELECT * FROM city_data WHERE city='Riyadh';`
3. `SELECT * FROM global_data ga WHERE ga.year in (SELECT year FROM city_data WHERE city='Riyadh');`

- **Steps to Visualise Data**

1. Open CSV in Google Spreadsheets
2. Import data from exported CSV files
3. Organize columns
4. Calculate moving averages
 - a. Used 10 years moving average at the beginning but the line was so smooth and hard to get observations out of it, so, 3 years moving average was used later

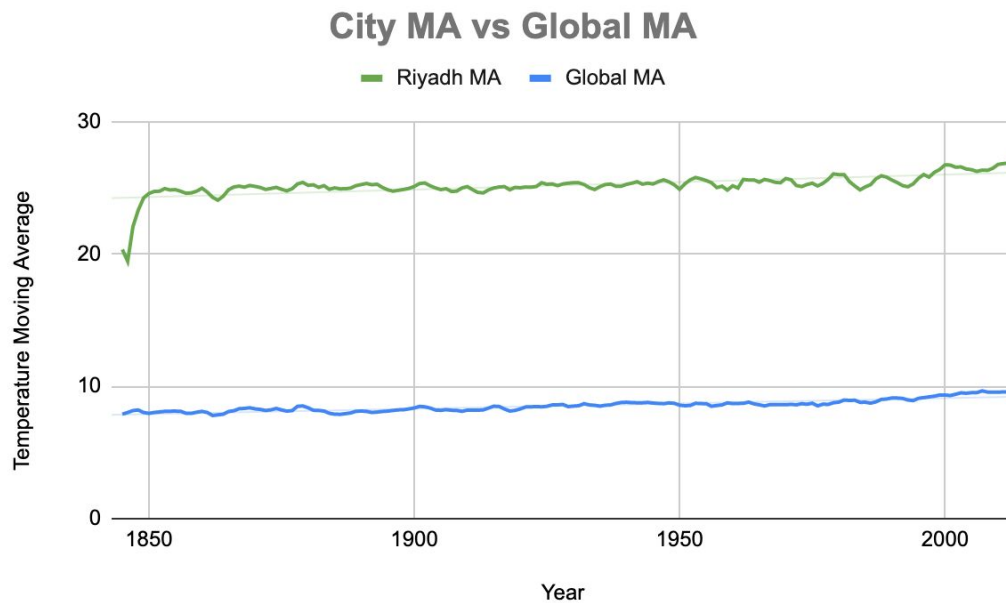
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b. Data organized in columns:

	A	B	C	D	E	F	G	H
1	Country	City	Year	Avg Temp	Riyadh MA		Avg Temp	Global MA
2	Saudi Arabia	Riyadh	1843	24.74			8.17	
3	Saudi Arabia	Riyadh	1844	15.45			7.65	
4	Saudi Arabia	Riyadh	1845	20.82	20.33666667		7.85	7.89
5	Saudi Arabia	Riyadh	1846	22.06666667	19.44555556		8.55	8.01666667
6	Saudi Arabia	Riyadh	1847	23.31333333	22.06666667		8.09	8.16333333
7	Saudi Arabia	Riyadh	1848	24.56	23.31333333		7.98	8.20666667
8	Saudi Arabia	Riyadh	1849	24.8	24.22444444		7.98	8.01666667
9	Saudi Arabia	Riyadh	1850	24.34	24.56666667		7.9	7.95333333
10	Saudi Arabia	Riyadh	1851	25.03	24.72333333		8.18	8.02
11	Saudi Arabia	Riyadh	1852	24.85	24.74		8.1	8.06
12	Saudi Arabia	Riyadh	1853	24.93	24.93666667		8.04	8.10666667
13	Saudi Arabia	Riyadh	1854	24.72	24.83333333		8.21	8.11666667
14	Saudi Arabia	Riyadh	1855	24.92	24.85666667		8.11	8.12
15	Saudi Arabia	Riyadh	1856	24.57	24.73666667		8	8.10666667
16	Saudi Arabia	Riyadh	1857	24.26	24.58333333		7.76	7.95666667
17	Saudi Arabia	Riyadh	1858	25.01	24.61333333		8.1	7.95333333
18	Saudi Arabia	Riyadh	1859	24.95	24.74		8.25	8.03666667
19	Saudi Arabia	Riyadh	1860	24.94	24.96666667		7.96	8.10333333
20	Saudi Arabia	Riyadh	1861	24.13	24.67333333		7.85	8.02
21	Saudi Arabia	Riyadh	1862	23.77	24.28		7.56	7.79
22	Saudi Arabia	Riyadh	1863	24.28	24.06		8.11	7.84
23	Saudi Arabia	Riyadh	1864	25.03	24.36		7.98	7.88333333
24	Saudi Arabia	Riyadh	1865	25.23	24.84666667		8.18	8.09
25	Saudi Arabia	Riyadh	1866	24.92	25.06		8.29	8.15
26	Saudi Arabia	Riyadh	1867	25.22	25.12333333		8.44	8.30333333
27	Saudi Arabia	Riyadh	1868	25	25.04666667		8.25	8.32666667
28	Saudi Arabia	Riyadh	1869	25.3	25.17333333		8.43	8.37333333
29	Saudi Arabia	Riyadh	1870	25.02	25.10666667		8.2	8.29333333
30	Saudi Arabia	Riyadh	1871	24.73	25.01666667		8.12	8.25
31	Saudi Arabia	Riyadh	1872	24.87	24.87333333		8.19	8.17
32	Saudi Arabia	Riyadh	1873	25.24	24.94666667		8.35	8.22
33	Saudi Arabia	Riyadh	1874	24.98	25.03		8.43	8.32333333
34	Saudi Arabia	Riyadh	1875	24.43	24.88333333		7.86	8.21333333
35	Saudi Arabia	Riyadh	1876	24.89	24.76666667		8.08	8.12333333
36	Saudi Arabia	Riyadh	1877	25.47	24.93		8.54	8.16
37	Saudi Arabia	Riyadh	1878	25.51	25.29		8.83	8.48333333
38	Saudi Arabia	Riyadh	1879	25.24	25.40666667		8.17	8.51333333
39	Saudi Arabia	Riyadh	1880	24.8	25.48333333		8.48	8.53333333

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c. 3-years Moving averages:



- **Observations**

1. As we can see from the chart Riyadh is always hotter than the global average
2. The difference between Riyadh and the global average is not consistent
3. There are some years where Riyadh got cooler where the global average was getting hotter such as at 2000
4. We can notice that the world, in general, is getting hotter