



أكاديمية مسك
MISK ACADEMY



UDACITY

Misk / Udacity Data Analysis Nanodegree

P1: Exploring Weather Trends

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- **Project description:**

Create visualization to compare weather trends between my country's temperature and global temperature.

- **Goals:**

1. Extract data using SQL language.
2. Calculate moving average.
3. Create line chart using excel worksheet.
4. Make observations about this data.


- **Steps:**

1. Extract data using this query:

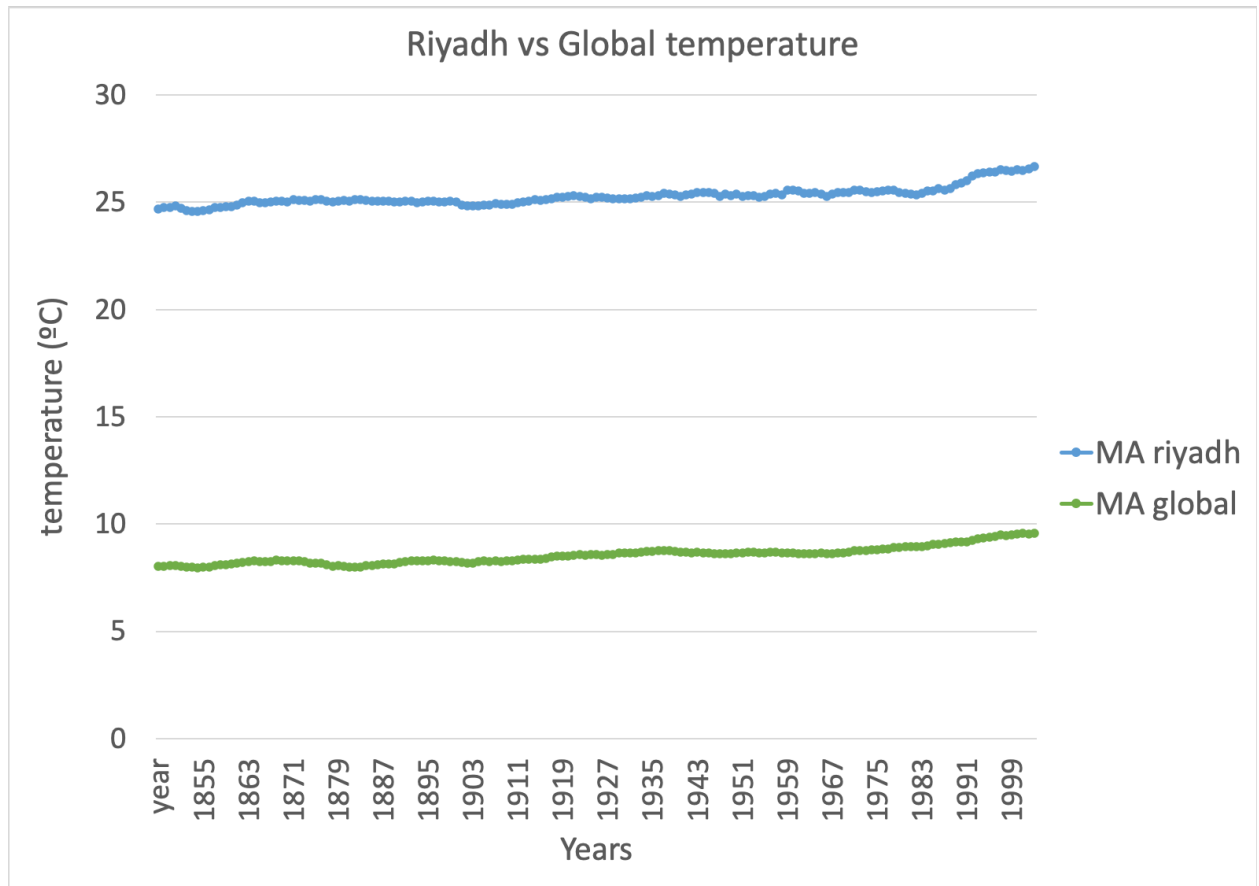
```
1  select
    city_data.year,city_data.avg_temp,city_data.city,global_data.avg_temp as
    "avg global tempreature"
2  from city_data
3  join global_data
4  on global_data.year = city_data.year
5  where city='Riyadh' and country='Saudi Arabia'
```

2. Moving average:

I calculate 10 years of moving average to get the line chart smooth, I use “=average” function in excel. This screenshot for my results.

year	avg_temp	city	avg global temperture	MA riya dh	MA global
1848	24.56	Riyadh	7.98		
1849	24.8	Riyadh	7.98		
1850	24.34	Riyadh	7.9		
1851	25.03	Riyadh	8.18		
1852	24.85	Riyadh	8.1		
1853	24.93	Riyadh	8.04		
1854	24.72	Riyadh	8.21		
1855	24.92	Riyadh	8.11		
1856	24.57	Riyadh	8		
1857	24.26	Riyadh	7.76	 98	8.026
1858	25.01	Riyadh	8.1	24.743	8.038
1859	24.95	Riyadh	8.25	24.758	8.065
1860	24.94	Riyadh	7.96	24.818	8.071
1861	24.13	Riyadh	7.85	24.728	8.038
1862	23.77	Riyadh	7.56	24.62	7.984
1863	24.28	Riyadh	8.11	24.555	7.991
1864	25.03	Riyadh	7.98	24.586	7.968
1865	25.23	Riyadh	8.18	24.617	7.975
1866	24.92	Riyadh	8.29	24.652	8.004
1867	25.22	Riyadh	8.44	24.748	8.072
1868	25	Riyadh	8.25	24.747	8.087
1869	25.3	Riyadh	8.43	24.782	8.105
1870	25.02	Riyadh	8.2	24.79	8.129
1871	24.73	Riyadh	8.12	24.85	8.156
1872	24.87	Riyadh	8.19	24.96	8.219
1873	25.24	Riyadh	8.35	25.056	8.243
1874	24.98	Riyadh	8.43	25.051	8.288
1875	24.43	Riyadh	7.86	24.971	8.256
1876	24.89	Riyadh	8.08	24.968	8.235
1877	25.47	Riyadh	8.54	24.993	8.245
1878	25.51	Riyadh	8.83	25.044	8.303
1879	25.24	Riyadh	8.17	25.038	8.277
1880	24.8	Riyadh	8.12	25.016	8.269
1881	25.63	Riyadh	8.27	25.106	8.284
1882	24.66	Riyadh	8.13	25.085	8.278
1883	25.19	Riyadh	7.98	25.08	8.241
1884	24.8	Riyadh	7.77	25.062	8.175
1885	24.98	Riyadh	7.92	25.117	8.181
1886	24.98	Riyadh	7.95	25.126	8.168
1887	24.81	Riyadh	7.91	25.06	8.105

3. Line chart:



4. Observations:

1. Riyadh's average temperature is hotter than
2. the global average temperature, with huge
3. differences.
4. Riyadh's average temperature getting higher
5. over the years.
6. The global average temperature getting hotter
7. over the years.
8. Riyadh average temperature between 26.65 °C and 24.55 °C.
9. Global average temperature between 9.556 °C and 7.968 °C.