Project 1

Project Name: Explore Weather Trends

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Sponsor: MISK

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Steps

1- Extracting the data
   a. First Code “Select * from global_data”
   b. Second Code “Select * from city_list” and then I downloaded the data into csv. Secondly, I filtered the data to see what the nearest city to me is. I found that Riyadh is the nearest.
   c. Third code is “Select * from city_data” and then I filtered the data using excel and extracted Riyadh avg_temp data.
2- Copy and paste global data and city data into one EXCEL sheet.
3- Riyadh data starts from 1843 but there are two missing columns in 1846 and 1847. So, I started to apply the moving average method starting from 1848. Furthermore, to make a correct comparison I also started to apply the moving average method for the global data starting from 1848 until 2004. I had made every ten years into one interval to make it better to how the temperature is changing.
4- Moving average method that I used starting from year 1848 is by taking every ten-year moving average and applying the formula to the whole sheet. For example, the function here. “=AVERAGE(B2:B11)”
   A sample for the moving average data.

year	city	country	avg_temp	Moving_Riyadh_Avg	year	avg_temp	Moving_Global_Average	Year interval
1848	Riyadh	Saudi Arabia	24.56	24.698	1848	7.98	8.026	[1848,1858]
1849	Riyadh	Saudi Arabia	24.8	24.743	1849	7.98	8.038	[1848,1858]
1850	Riyadh	Saudi Arabia	24.34	24.758	1850	7.9	8.065	[1848,1858]
1851	Riyadh	Saudi Arabia	25.03	24.818	1851	8.18	8.071	[1848,1858]
1852	Riyadh	Saudi Arabia	24.85	24.728	1852	8.1	8.038	[1848,1858]

5- Using all above knowledge I have inserted a line chart and assigned the year interval as a horizontal-axis, and the Moving average for Riyadh, and the Moving average for Global in the vertical-axis. Therefore, I obtain the below graph.

Observations

1- The temperature in Riyadh is more than the global by 196.05% (Sum of Avg_Tmp_Riyadh)/(Sum of avg_Tmp_Global)-1
2- The temperature in Riyadh is hotter.
3- The global is getting hotter.
4- The moving average are upward for both Global and Riyadh.
5- In the last few years, the T AVG in Riyadh increase by noticeable amount.

Moving_Average Graph