PROJECT 1

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First of all, I need to explain about the tools that I used for comparison.

I live in Canada in British Columbia. That is why I selected Canada and Victoria as my city

I used SQL to see the totally data by this query with conditions (country would be Canada and city would be Victoria) :

select * from city_data

where country = 'Canada' and city = 'Victoria'

I made excel file that its name is my_data

After that I extracted data to the first sheet of this file (city_data)

I need to do like this query for global_data. As I found temperature in Victoria started from 1828 in city_data, I apply condition for year in following query:

select * from global_data

where year >=1828

I extracted data to the second sheet of this file (global_data)

In city_data sheet, I found some missing data in year 1830,1831,1846 (I found these missing data by filtering on this dataset and selecting blank option in the avg_temp column)

I filled out these blank cells by average of two prior temperature's (I made it in column E)

In this sheet we planned to create moving average. In column F made 7 years moving average would be started from 1834

In global_data sheet in column C, I made 7 years moving average would be started from 1834 as well.

I copy the rest of data in city_data to result sheet and got temperature of global from global_data sheet by VLOOKUP function.
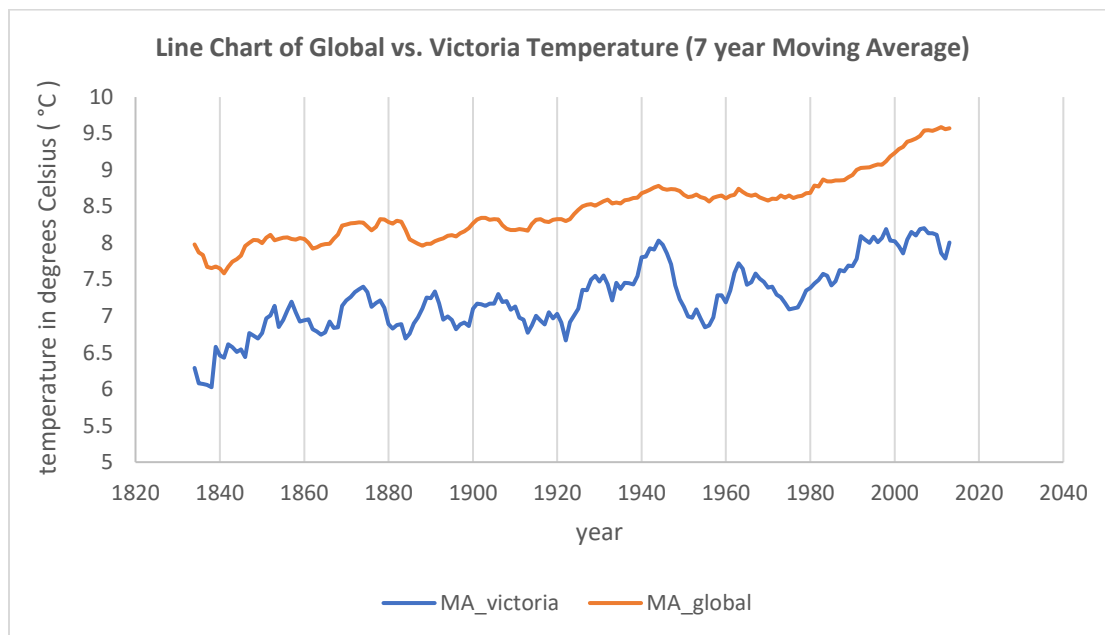
I used line chart to compare them. This is my result:

1. Global temperature is hotter than Victoria temperature in all the time

2. As I see in this chart, trend of global temperature has lower fluctuated that Victoria City. It shows changing of temperature in Victoria City is really more than global totally

3. In some years, Victoria temperature has most different from global. For example, approximately in 1920, 1955,1975 Victoria temperature is actually far from global temperature

4. Conversely, in some years both temperatures are close together. For example, 1945 is closest.

5. If we want to get totally idea about comparison, total average of global is 8.46 and total average in Victoria is 7.24. it shows base on average global temperature is 1.22 higher than Victoria temperature.

6. Minimum temperature in my city happened is 1838, while for global temperature we see minimum value in 1841

7. By regarding to uptrend in these charts, we expect maximum temperatures happen in last year in our data. It happened for global (2011), but for Victoria is 2007

8. We see in this chart that Victoria temperature is really fluctuate. That is why standard deviation in Victoria (0.4681) is more than STDEV in global (0.4457)

9. Final result is about the kind of their trends. Global temperature looks continue its trend and it can reach to 10 sooner, but Victoria temperature maybe go down in future or go up because of volatile condition that we are looking at chart.