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Project:

Exploring Weather Trends

1) EXTRACTING THE DATA

- SQL query to find the city nearest to me :

  ```
  select * from city_list where country='Argentina';
  ```

I find out there were two cities: Cordoba and Rosario.
The nearest city to me is Rosario.

- SQL query to extract the city level data (In my case Rosario – Argentina) :

  ```
  select  * from city_data where country='Argentina' and city='Rosario';
  ```

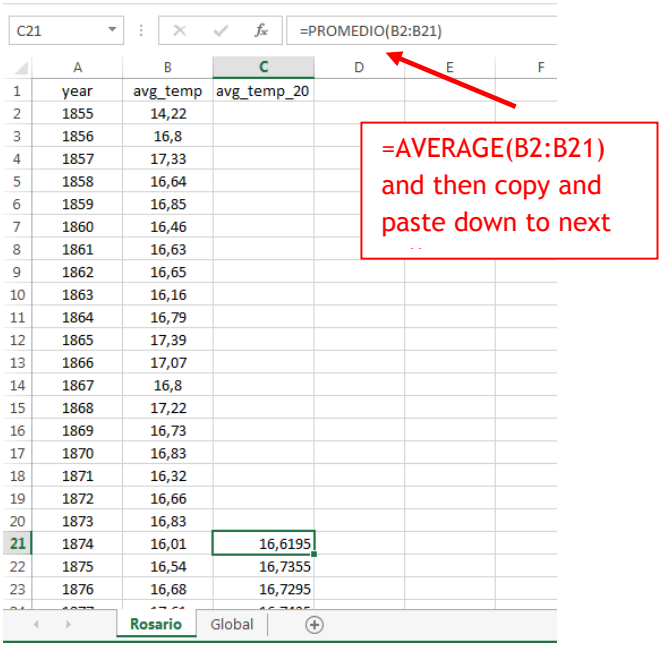
- SQL query to extract the global data:

  ```
  select  * from global_data;
  ```

2) OPEN UP THE .CSV : USING EXCEL

Table 1: Rosario's values range from year 1855 to 2013
Table 2: Global' values range from year 1750 to 2015

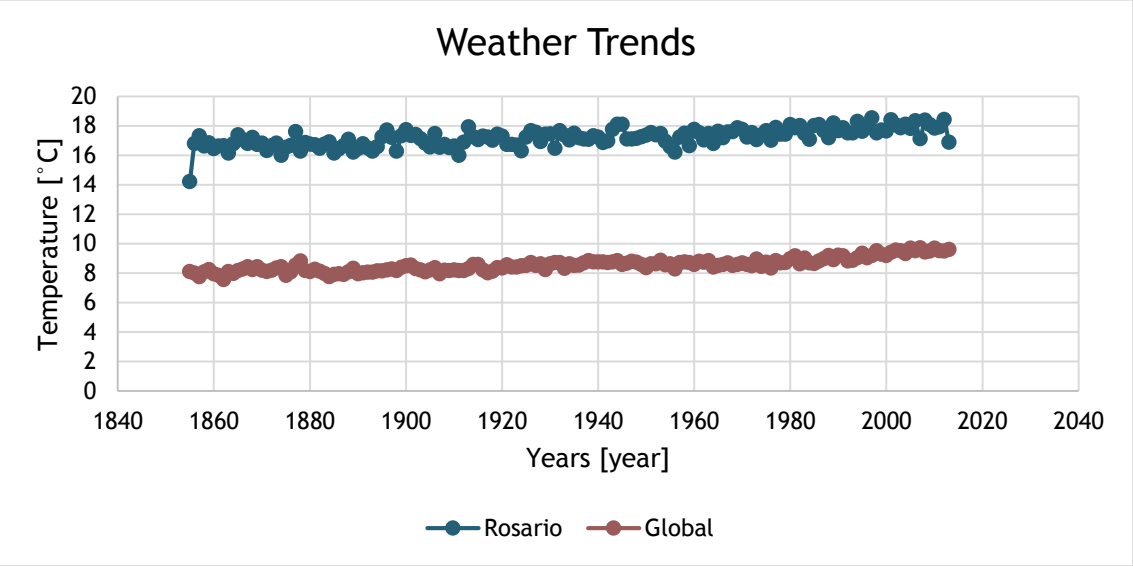
I split the values of the second table so that the graphs have the same length.
I calculated a new column, called avg_temp_20 in both tables. I used 20 year moving average because it allows me to observe the long term trend with less noise:



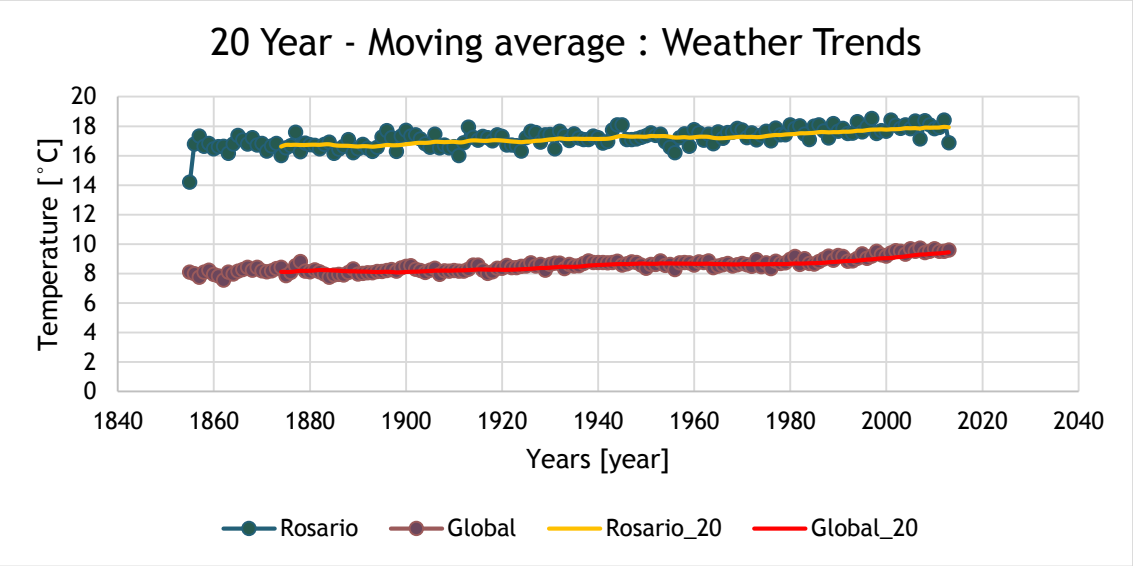
	A	B	C	D	E	F
1	year	avg_temp	avg_temp_20			
2	1855	14,22				
3	1856	16,8				
4	1857	17,33				
5	1858	16,64				
6	1859	16,85				
7	1860	16,46				
8	1861	16,63				
9	1862	16,65				
10	1863	16,16				
11	1864	16,79				
12	1865	17,39				
13	1866	17,07				
14	1867	16,8				
15	1868	17,22				
16	1869	16,73				
17	1870	16,83				
18	1871	16,32				
19	1872	16,66				
20	1873	16,83				
21	1874	16,01	16,6195			
22	1875	16,54	16,7355			
23	1876	16,68	16,7295			

3) CREATE A LINE CHART

- Weather trends without moving average:



- Weather trends with 20 year moving average:



4) MAKE OBSERVATIONS

a) My city is hotter compared to the global average and the difference is consistent over time.
b) There is a consistent change of my city temperatures compare to the changes in the global average.
c) The trends look gradually increasing linear in Rosario and Global.
d) The world is getting hotter and it has been gradually consistent over the last few hundred years.