

Explore Weather Trends

Steps taken to prepare the data to be visualized in the chart

- What tools did you use for each step?

I used **SQL** to extract the data from the database.

I also used **excel** to arrange this data into a spreadsheet and calculate **Moving Average**.

I finally used **Tableau Public** to Plot the line chart to explore the weather Trends.

Below are the SQL commands I used to do extract the data

- `SELECT city FROM city_list WHERE country = 'Ukraine';`
- `SELECT year, avg_temp FROM city_data WHERE country = 'Ukraine' and city = 'Kiev';`
- `SELECT * FROM global_data;`

- How did you calculate the moving average?

I calculated the moving average of 7 years by using the command `=average(cell2:cell8)` and then dragging down till the last value.

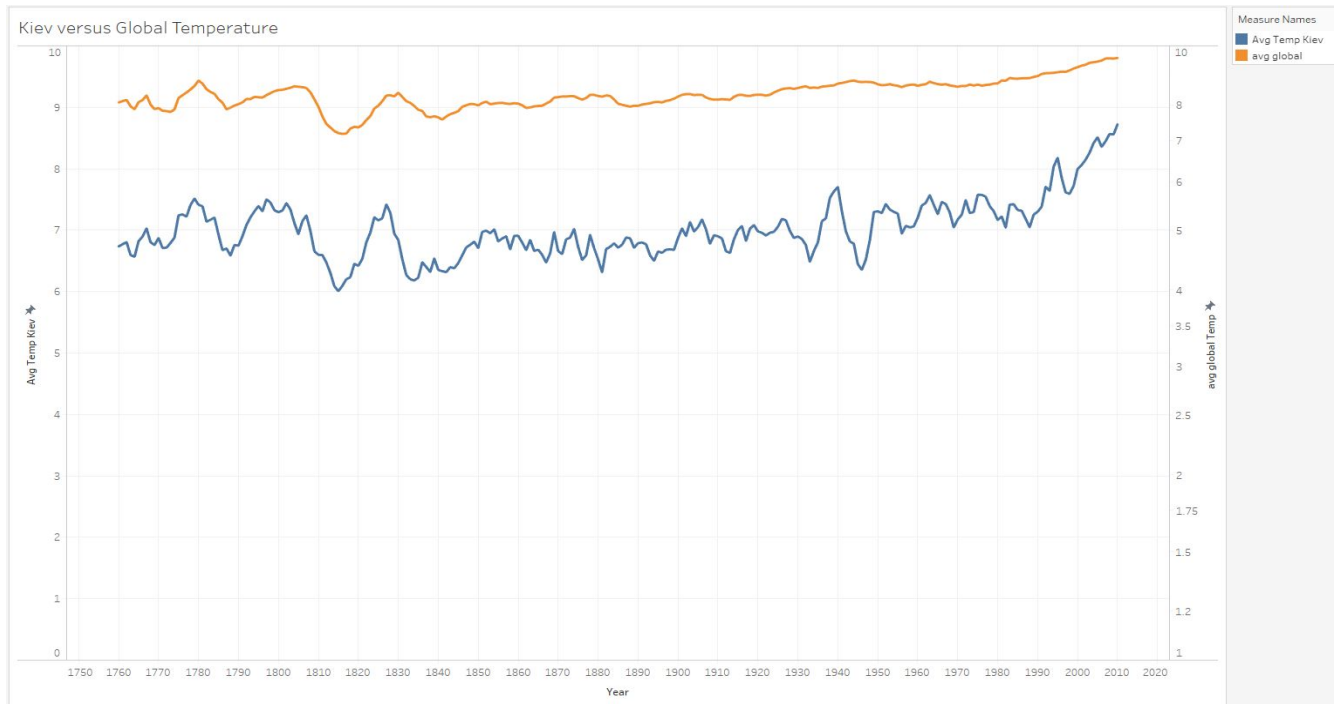
- What were your key considerations when deciding how to visualize the trends?

Since my consideration was to observe the variation in moving average global temperature against the moving average temperature of a local town (Kiev), I had some missing data.

Firstly I re-organized the data so that they fitted exactly because they didn't actually match well from the start.

Then I calculated the mean of the values of the whole column then inserting the values into the missin cells.

Line Chart with Global and Kiev Trends



Observations about the similarities and/or differences in the Trends

Differences

- We can clearly observe from the graph that the local temperature is smaller than the global temperature. This means Kiev has lower temperatures compared to the global average.
- In recent years, the local temperature(Kiev) has increased at a faster rate as compared to the global temperature.
- The variation in the temperature values are different, we observe from the chart that average global temperature is much smoother than than of average local temperature(Kiev), we observe more steep variations and the fluctuations are more pronounced.

Similarities

- Both temperature trends clearly show an overall increase over time. As time goes on both temperature values increase.