

Project: Explore Weather Trends

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Analysis Steps:

What tools did you use for each step?:

In order to extract the global data as well as the data for my city specifically, from the relevant databases provided, I used SQL queries.

Global Data:

```
SELECT*  
FROM global_data;
```

Data for Athens/Greece:

```
SELECT *  
FROM city_data  
WHERE city = 'Athens' AND country = 'Greece';
```

How did you calculate the moving average?:

After extracting the data using the SQL queries above, I merged the data (Global and Greece) in an excel file where I calculated the moving average for a 10-year period:

Formula:

=average(cell2:cell11)

I have copied the formula to all the relevant sales for both global and local data.

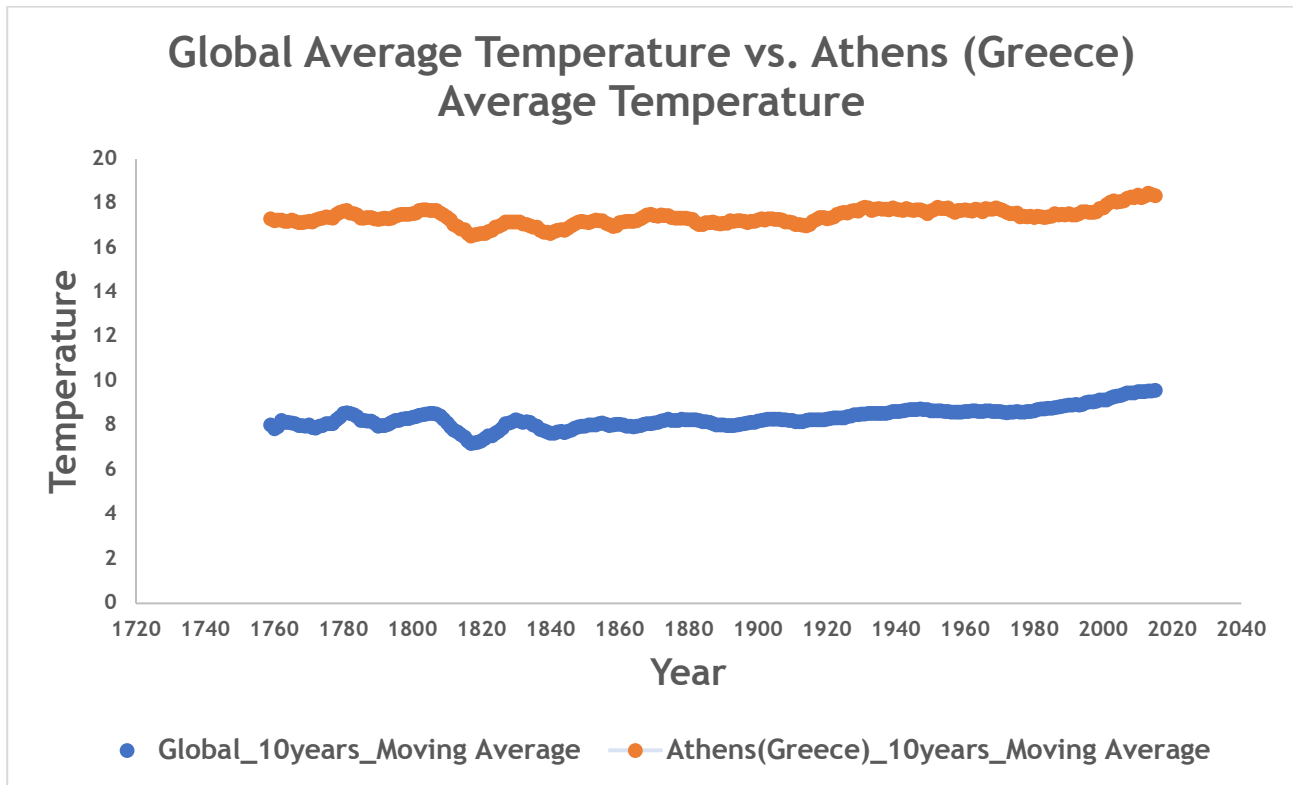
Missing Data:

There were some years for the raw data for Athens, Greece that had no temperature values. In order to be consistent, I have replaced these missing values by calculating the average temperature of the years that had values and used the result to replace any empty cells (Years: 1750, 1751, 1752, 2014 and 2015).

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

When deciding how to visualise the trends, my key consideration was to show what where the differences in terms of average temperatures (by decade) as well as whether there were any significant increases or decreases for any of the data sets.

Line chart with local and global temperature trends:



Observations about the similarities and/or differences in the trends:

Differences:

- Average temperatures in Athens seem to be higher compared to the ones on a global level.
- Overall, from 1750 to 2015, Global average temperature has increased by 19% while the average temperature in Athens by only 6%; this means that increase for the Global temperature vs. the local one is higher, by 221%.

Similarities:

- Although the differences in avg. temperature increase might be significant, unfortunately the both chart lines show that avg. temperature is rising, both globally and locally.
- There is an increase in trend for both data sets over the years, with 2015 showing the highest average temperature.