

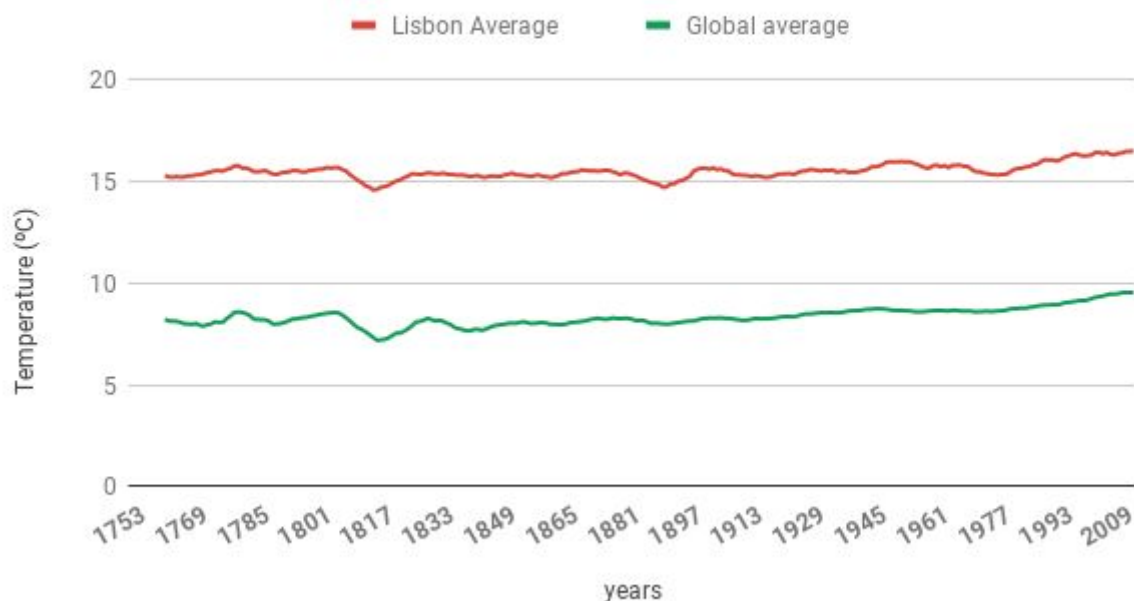
Exploring Weather Trends

My first step for this project was to import the csv file from the Udacity website. For this, I wrote the following query

```
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SELECT c.year, c.avg_temp AS lisbon_avg_temp, g.avg_temp AS global_avg_temp  
FROM city_data c  
JOIN global_data g  
ON c.year = g.year  
WHERE c.city = 'Lisbon';  
-----
```

This query allowed me to access data from global and local temperature averages from the city I live, Lisbon, since 1753 until 2013. To assemble the chart line graph I used Google spreadsheets to open the CSV file, as previously given example of

10 years moving average



Graph 1: Global and Lisbon temperature over the years.

moving averages. Then I took the moving average of ten years for the global and lisbon temperature averages and with that data plotted the chart line graph 1.

Analyzing the graph 1, we can infer that the average temperature of Lisbon is higher than the global and this difference remains the same over the years. In the early 1800s, it is possible to see a slight drop in temperature averages for both measures and, even in this case, the distance between the lines remains almost unchanged.

When looking at the graph 1 it is possible see that from the 90's until the present day the planet is getting warmer, we can see a slope in the trend of the latest measures and Lisbon follows the increase although it seems to heat up more slowly.

From 1753 to approximately 1850 the average global temperature maintains a linear pattern and shows, neither heating nor cooling, only small oscillations. From 1850 it is possible to notice a slope with a positive linear coefficient, indicating a heating trend at the average temperature. When we look at lisbon average, the same profile without increasing the average temperature lasts until 1900, when the average temperature acquired a linear growth.