Data Analyst Nanodegree

Explore Weather Trends

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April 2020

1- Task Solution

Data Extraction was conducted using SQL queries, with the following instructions. Once the queries were run in the server, a copy of the file was downloaded into my local drive.

Table	SQL Commands
City_data	SELECT * FROM city_data;
Global_data	SELECT * FROM global_data;
City_list	SELECT * FROM city_list;

Next step, was the data analysis, the approach for this process are:

A- Use python and a Jupyter notebook to run the analysis
B- Calculate Moving Average (MA) of 10 years.

2- Analysis

The global average temperature is in the range of 7,20 – 9,59 Celsius, the histogram shows a skewed-left data distribution. (Left image from figure 1)

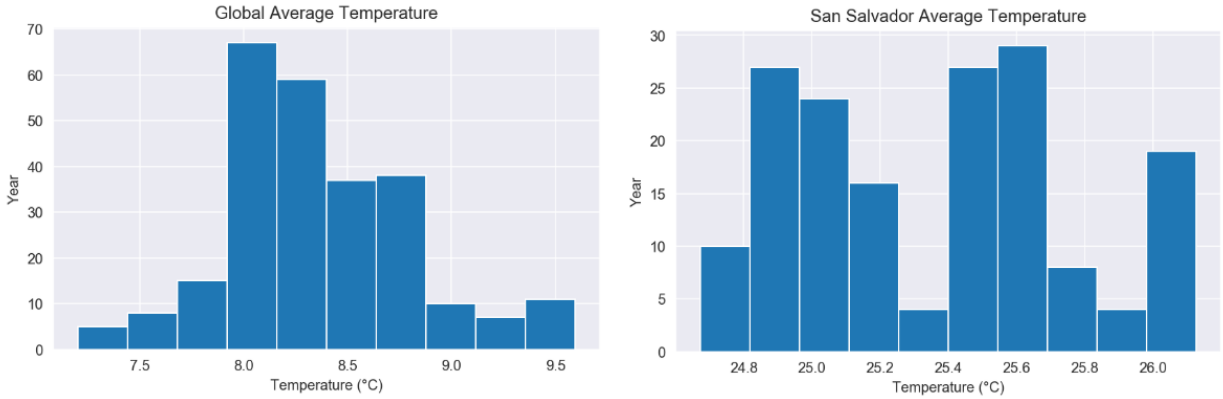

Figure 1 – Global Average Temperature and San Salvador Average Temperature

San Salvador average temperature is in the range of 24,67 to 26,12 Celsius, the histogram shows a bimodal data distribution. (Right image from figure 1).

3- Conclusions

Is your city hotter or cooler on average compared to the global average? Has the difference been consistent over time?

There is a clear uptrend visible, in the city of San Salvador and also globally

“How do the changes in your city’s temperatures over time compare to the changes in the global average?”

Changes are quite similar; both are in the range of 3 Celsius.

What does the overall trend look like? Is the world getting hotter or cooler? Has the trend been consistent over the last few hundred years?

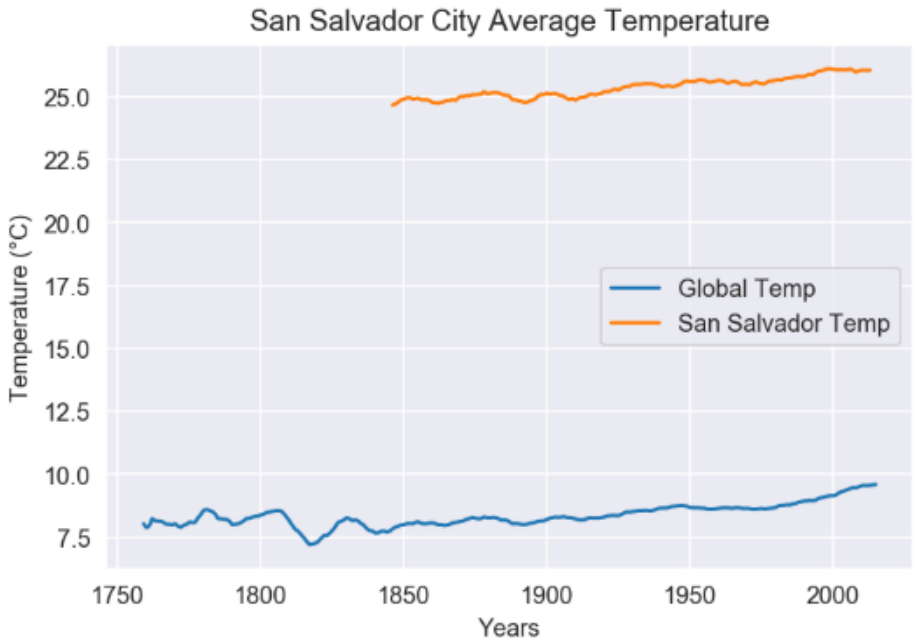

Figure 2 – Global Average Temperature vs San Salvador Average Temperature

Based on the outcomes above, the world is getting hotter. There is a visible trend in the upward direction, during the last 150 years.