Udacity Data Analyst Nano Degree Programme

Project 1 Submission

Project Title:

Comparison of Lagos, Nigeria & Global Temperature Data (1849-2013).

***NB:** The line graph can be found on the last page.*

Objective:

Your goal will be to create a visualization and prepare a write up describing the similarities and differences between global temperature trends and temperature trends in the closest big city to where you live.

Steps Taken:

1. I extracted the data from SQL using the following code:

```
SELECT city_data.year, city_data.avg_temp
AS city_temp, global_data.avg_temp AS global_temp
FROM city_data JOIN global_data
ON global_data.year = city_data.year
WHERE city_data.country = 'Nigeria' and city_data.city = 'Lagos';
```

2. I downloaded the generated CSV file and opened it in Google sheets for my analysis.

3. I created two different columns to calculate ten years moving averages (1849-2013) of my city's temperature data and global temperature data respectively.
4. I filled missing values in the Lagos data with the average of the temperature data from (1849-2013).
5. I plotted a line graph to compare the calculated figures over a period of (1849-2013).
6. I labelled the X-axis as Average Temp (10 yrs.) and Y-axis as Year, legends as Lagos (c) and Global (c).

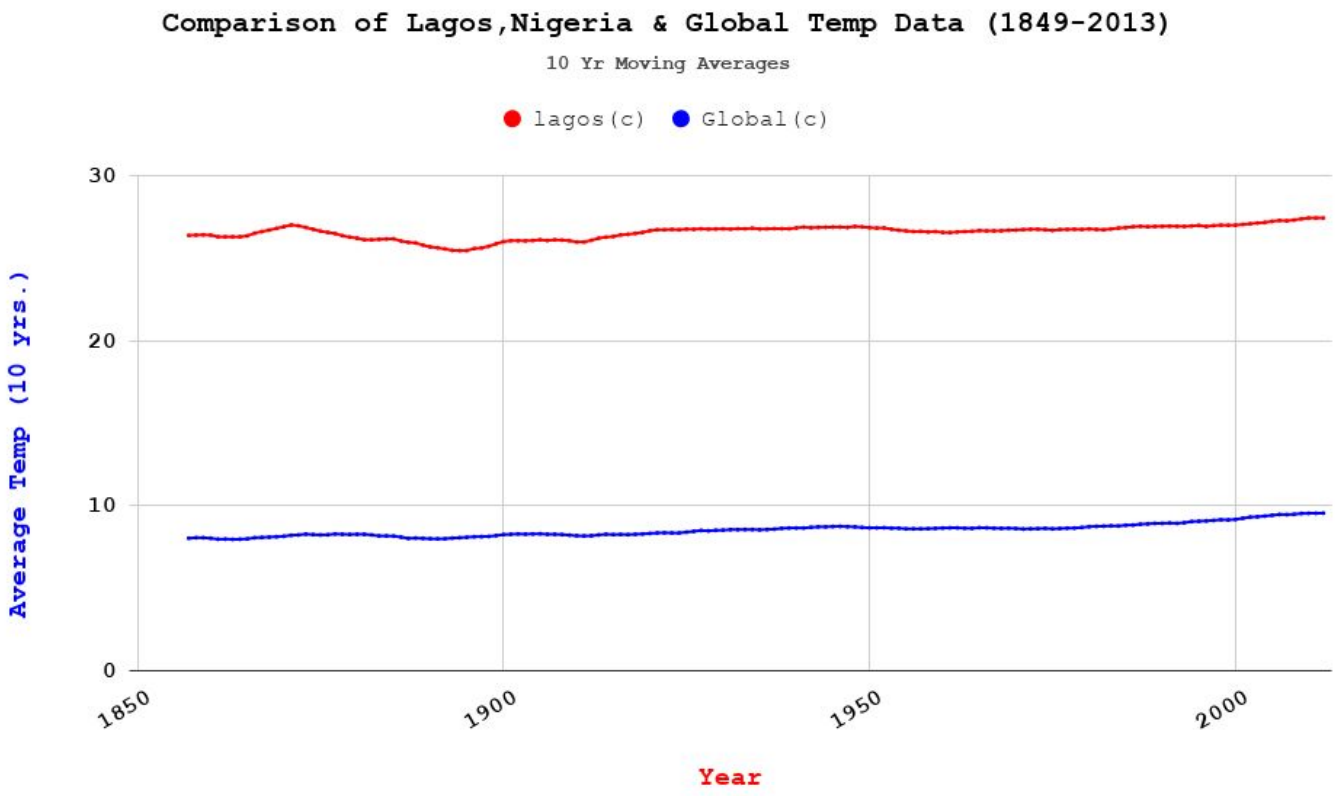
Observations:

1. From the line chart, over the years, the average temperature in Lagos has been consistently hotter than the global temperature generally.
2. Both Lagos and Global temperature have been on a steady upward trend from 1849-2013.
3. Lagos experienced a nearly stable temperature degree of 27-degree Celcius from 2002 - 2013.
4. The global temperature experienced a nearly stable temperature degree of 8-degree Celcius until 1995 when it went north at 9-degree Celcius.

Conclusion(s):

We can infer from the data computed and the line graph plotted that climate change is real.

Link to work: https://bit.ly/udacity-project1-patrickO


Comparison of Lagos,Nigeria & Global Temp Data (1849-2013)
10 Yr Moving Averages
lagos(c)
Global(c)
Average Temp (10 yrs.)
30
20
10
0
1850
1900
1950
2000
Year