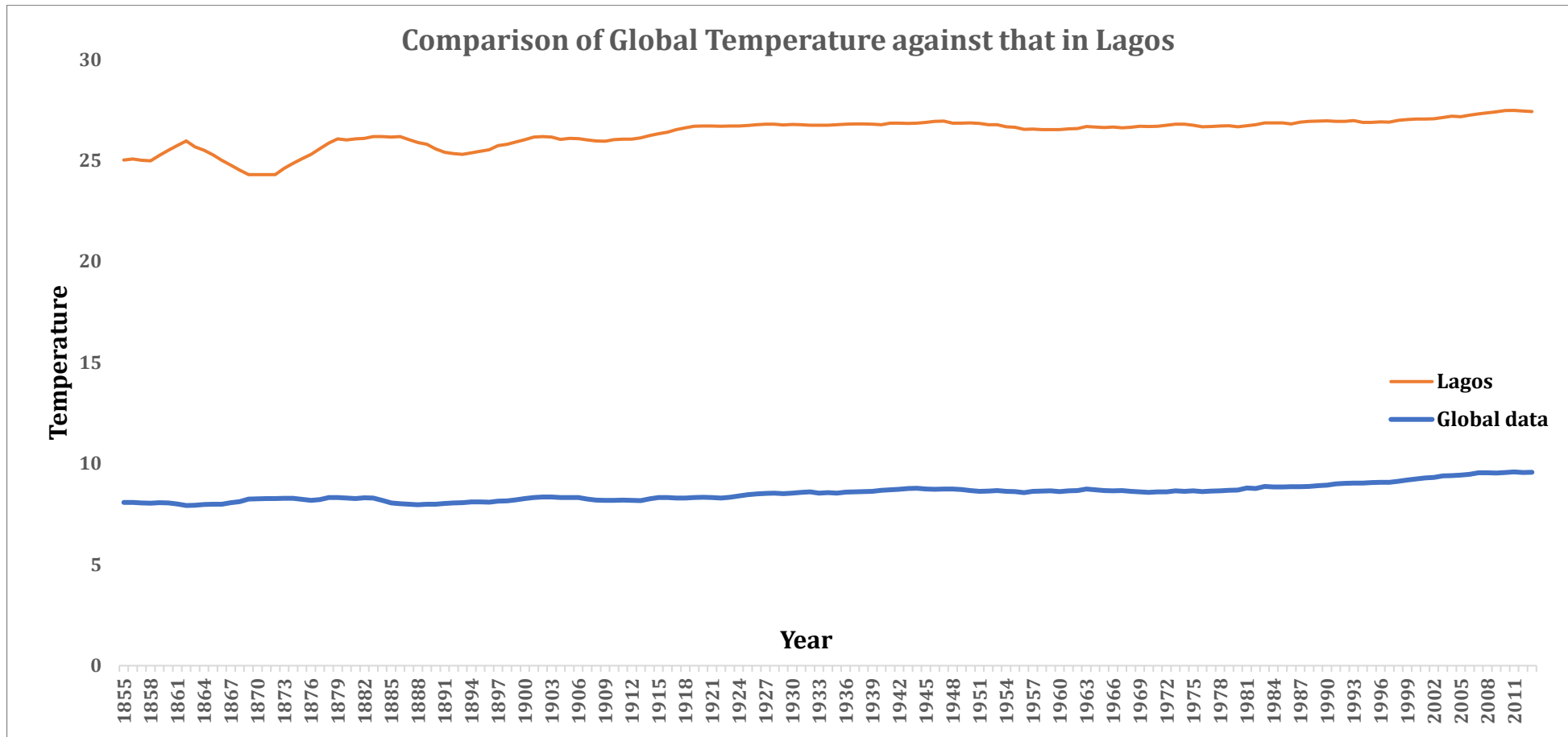


## PROJECT 1: EXPLORING WEATHER TRENDS

Elohor Okpako

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Following an extraction of global data and that of the Lagos, the city where I reside, the trend showing the comparison of the data is presented in the line chart below:



## STEPS TAKEN TO EXTRACT THE DATA AND GENERATE CHART

- The data was extracted from the Udacity Classroom, SQL environment. To extract the data, I wrote a query to extract the data. The query I wrote were:

```
SELECT *  
FROM city_data;
```

```
SELECT *  
FROM city_list;
```

```
SELECT *  
FROM global_data;
```

- Afterwards, I downloaded the file in a csv format (comma separated variable) and opened it in an Excel spreadsheet.
- I extracted the temperature data for Lagos from the city\_data and compared them with that from global data. I used only data from 1849-2013 in the global data because these were the data in the corresponding Lagos temperature data.
- Some of the data in Lagos were missing, so I filled those missing data with the average of the entire data. The average was gotten by calculating a sum of the entire temperature using the =sum() function in excel and dividing by the number of occurrences.
- To obtain an even trend, I calculated the 7-moving average of the temperature using the =average() function of the first seven temperature data. I did a flash fill to fill the rest.
- The trend lines for the data were generated by using the insert tab (navigate to the Insert Chart). The preference to use a line chart was informed primarily because of the characteristic of the visualization to show the relationship between the two parameters of interest.

## OBSERVATIONS

- The average temperature in my city, Lagos is higher than the average of the world, suggesting that Lagos is hotter than the average city in the world.
- The trend is an slowly rising upward trend for both data, suggesting that the world is heading to a global warming crisis in the coming years.
- The upward trend in Nigeria is however steeper with spikes and fluctuations than that of the global data. This is observed around 1861- 1879.
- The rise in the trend is mostly observe towards the end of the line, 2002-2013 with a sharp rise in this area.