OUTLINE OF STEPS TAKEN

- Extraction of Data with the SQL tool : I made use of the query
  SELECT *
  FROM global_data;

  SELECT *
  FROM city_data
  WHERE city = 'Port Harcourt';

- Using the Forecast Function of the Excel Software to fill up blank cells in the Extracted Data [=FORCAST(x, known_y's, known_x's)]
- Calculating the Moving Average (7 Points Moving Average) of both the city and global average temperature data using the Average Function [=Average(F2:F8)]
- Plotting the Moving Average of both Charts using the EXCEL tool.
- I made use of consistent scale to enable easy understanding of the chart.
- I use colors that made the chart visible.
- I made use of a title to show what the chart represents.
- I ensure that the graph was not complicated but clear and easy to understand.

Temperature Trend

(7_Point MA)

Legend:
7 day MA glb
7 day MA city

Y-axis: Average Temperature
X-axis: Year
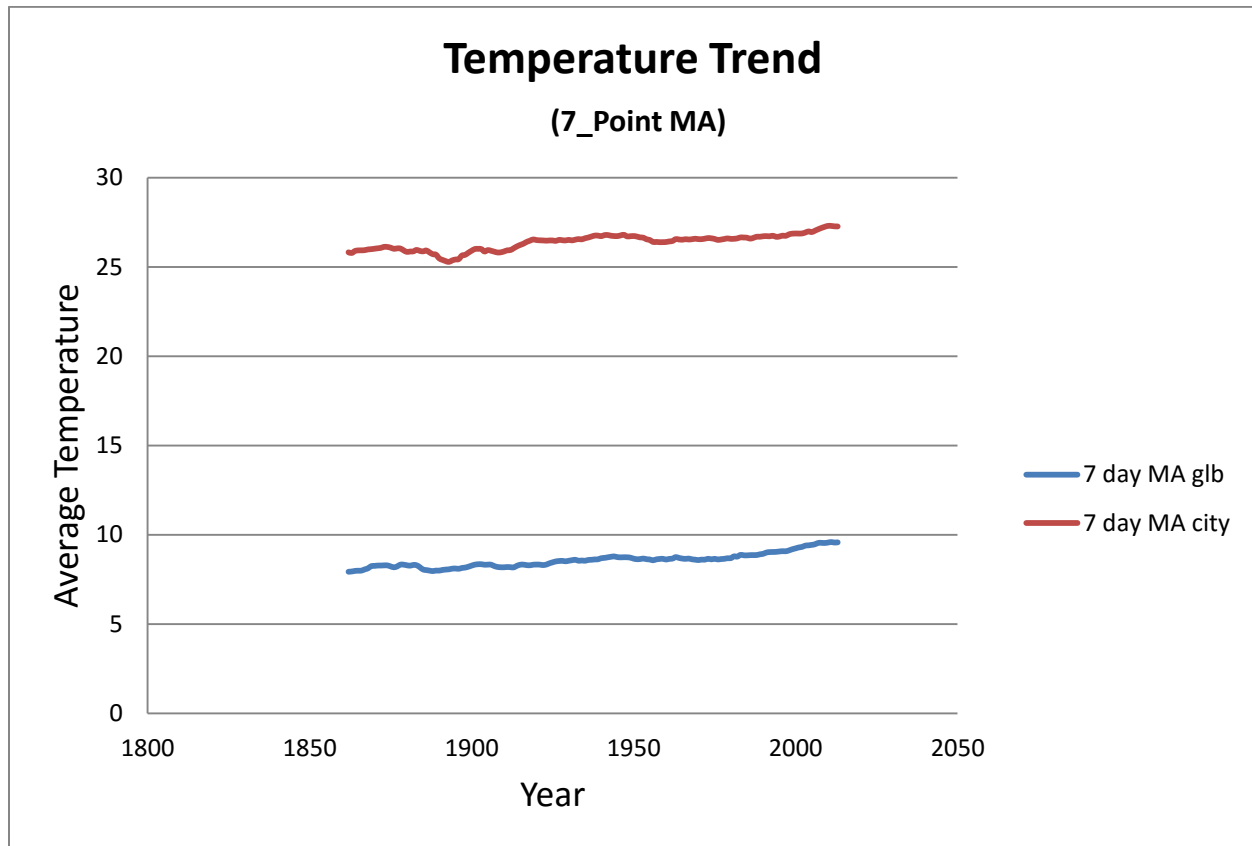
OBSERVATIONS

- My city is hotter compared to global temperature and the difference is mostly consistent over time
- As the city's average temperature rises, global average temperature also rises
- From the chart's analysis, the world is getting hotter and has been mostly consistent over the last 100 years, this is likely the result of the ever-increasing industrialization, the emission of greenhouse gases into the atmosphere, crypto mining etc.
- The correlation coefficient r= 0.8 which is a strong relationship between global and city (Port Harcourt) temperature. [=CORREL (array1, array2)]

Correlation Between Global Avg_Temp & City Avg_Temp
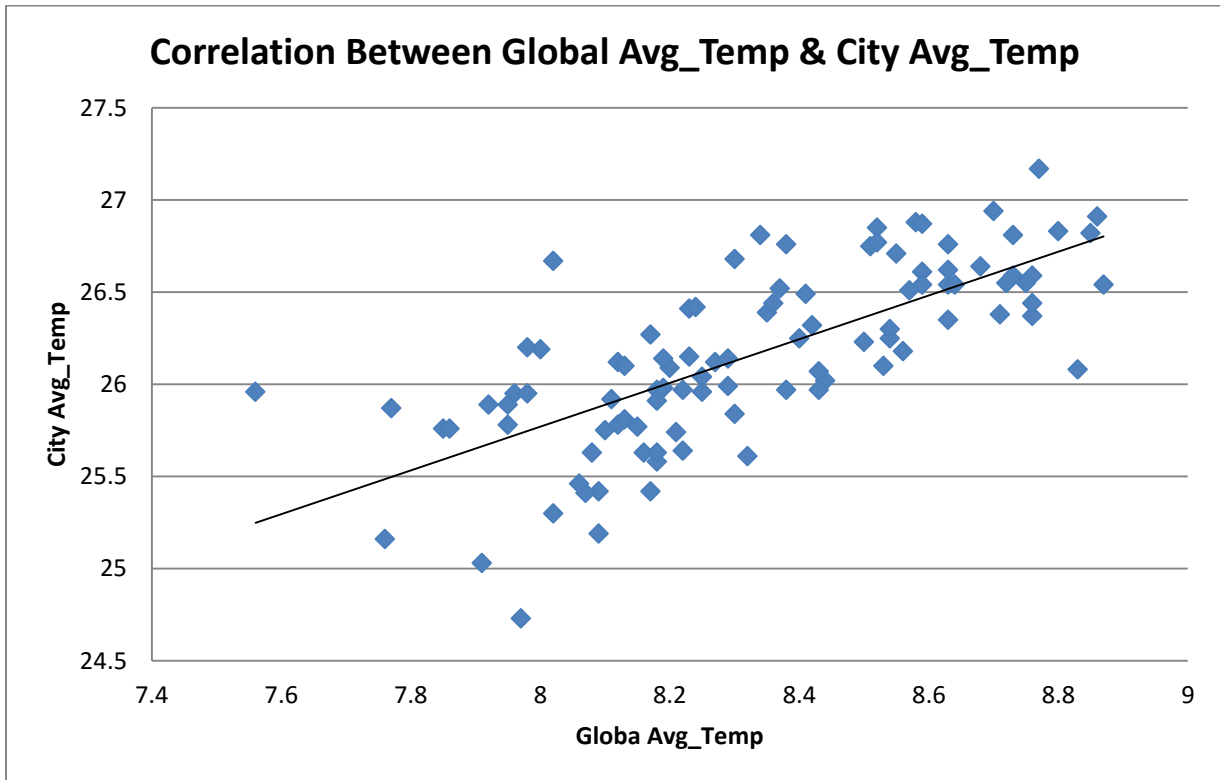
- My favorite cities around the globe:
  - ➢ Harbin, China
  - ➢ Denver, United States
  - ➢ Ottawa, Canada
  - ➢ Paris, France
  - ➢ Copenhagen, Denmark

These cities have a milder temperature compared to most of the cities around the globe, although they do get much colder during winter. Also, urbanization in these cities did not lead to too much deforestation, hence, the CO_2 emitted into the atmosphere is easily balanced due to the presence of trees.