Global Temperature VS Abuja Temperature Analysis over 10 year's intervals

The goal of this analysis is to find out if Abuja is hotter compared to the rest of this world and also determine if temperature has increased or decreased over the years

1. Get the Data:

    I explored the data given in the Udacity workspace and found out I had 3 different datasets to help me get the exact data I needed for my analysis. To get the data I used structured query language to separately get Abuja temperature data and Global temperature data while dropping missing values. Below are my queries.

```
SELECT
c.year,
c.city,
c.country,
c.avg_temp,
g.avg_temp as "avg_temp_global"
FROM city_data c
INNER JOIN global_data g
on c.year = g.year
WHERE a.city = 'Abuja'
AND c.avg_temp IS NOT NULL
```

```
SELECT
c.year,
c.city,
c.country,
c.avg_temp,
g.avg_temp as "avg_temp_global"
FROM city_data c
INNER JOIN global_data g
on c.year = g.year
AND c.avg_temp IS NOT NULL
```
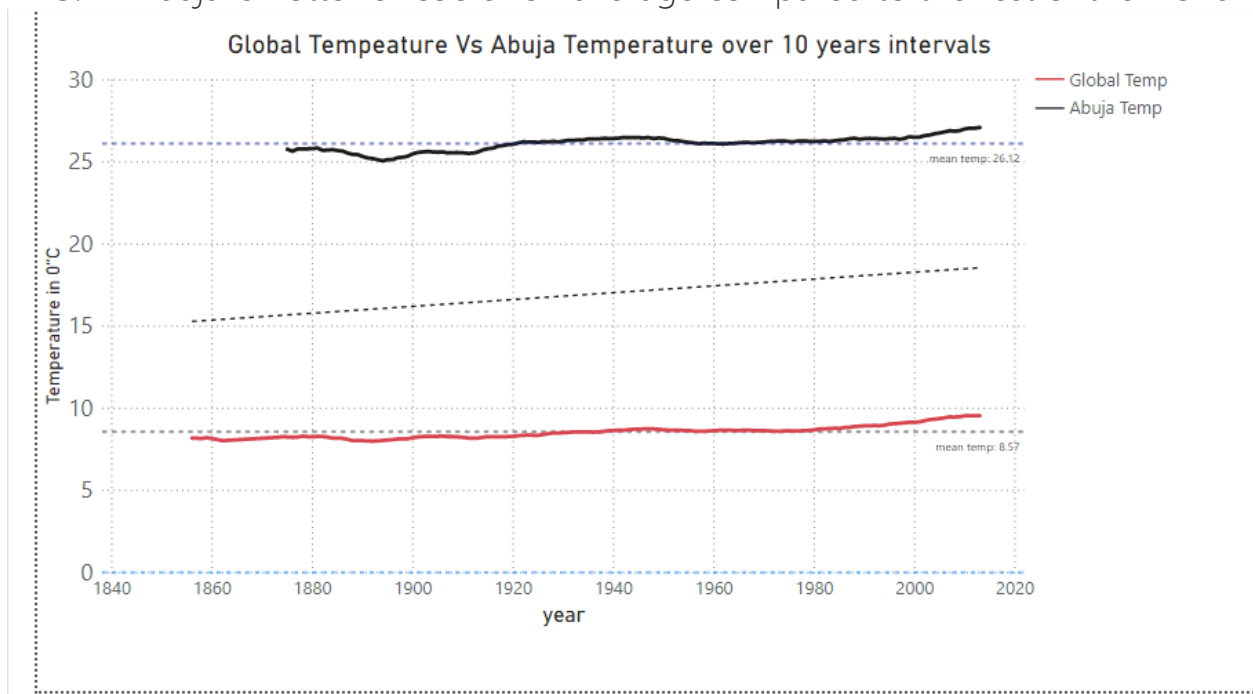
2. Exploring The Data:

The second step I took was exploring the datasets in excel to help me create a 10-year moving averages overtime on both the global and Abuja's data which will help me figure out how temperature has averaged after every 10 years. I achieved this by using an excel function Average and I filled other rows by copying and pasting the same function on each

3. Data Visualization:

This time I loaded the data on power BI and created a relationship (joined) between the data on the year column.

I went ahead to plot a line chart with Temperature (in Celsius) on the Y-axis and year on the X-axis. I added a trend line to get the overall trend, the average global temperature and the Abuja's temperature. This help me in my analysis to understand

1. The General trend over time
2. The difference in the average temperature of both data.
3. If Abuja is hotter or cooler on average compared to the rest of the world

Global Tempeature Vs Abuja Temperature over 10 years intervals

Conclusion:

- Overall Average of Abuja's temperature is higher compared to the overall Global average temperature so Abuja is hotter on Average

- The Temperature increase has been consistent over time and grows linearly

- The overall Trend is an uptrend. This shows that the world is getting hotter.

- Finally Abuja significant temperature difference with the global temperature has been consistent over time but from 1882-1898 the was a decrease in average temperature and the world got cooler but after then it has been increasing and we would agree with this analysis because of the global warming and climate change the world is experiencing.