Udacity Data Analyst Nano-Degree, January 2019
Project 1: Explore weather trends

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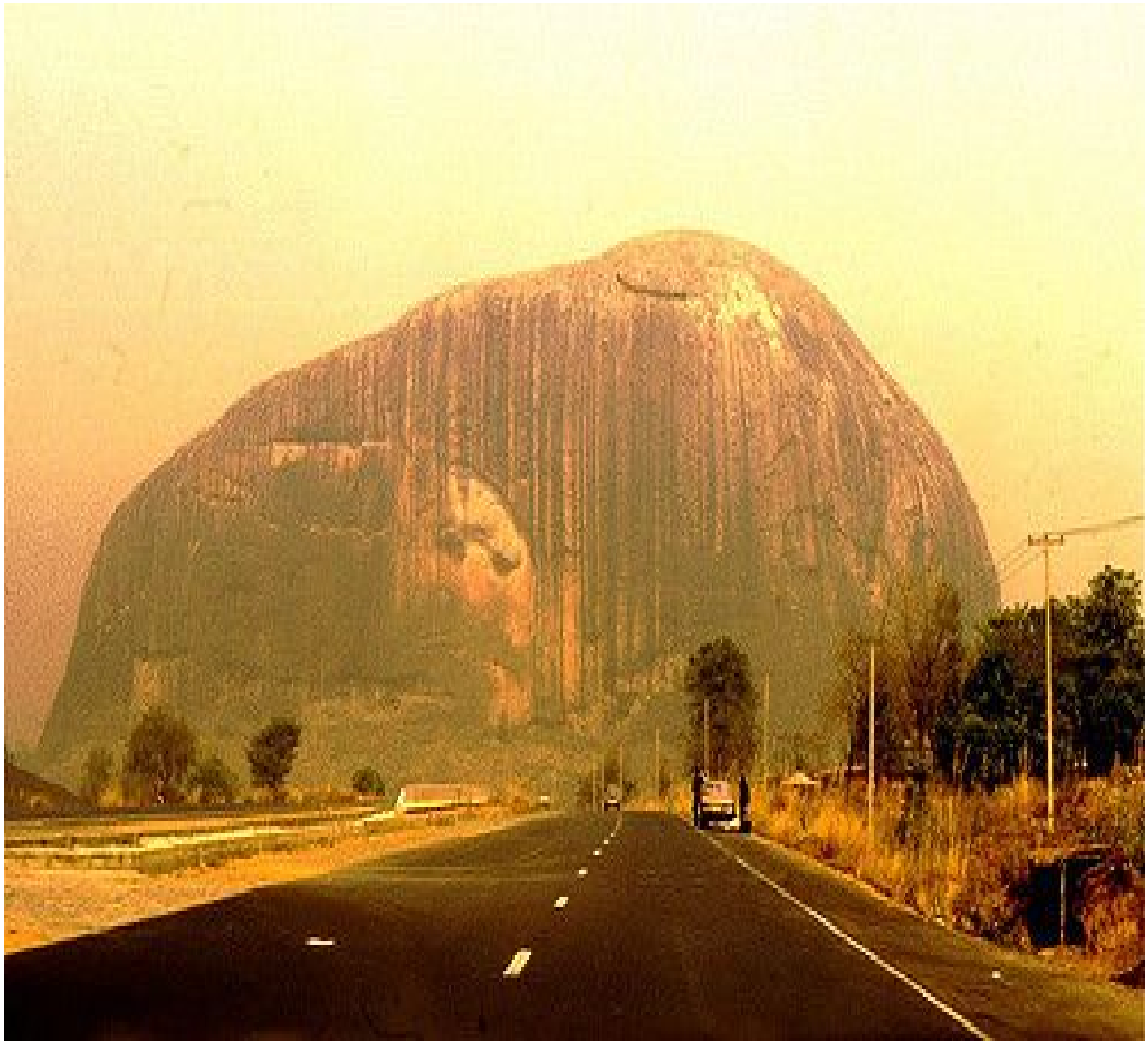


OVERVIEW

In this project, i analyzed the closest city to where i live available from the database given (Abuja, Nigeria) temperature data and global temperature data. Comparing the temperature trends in Abuja to overall global temperature trends.

From the database given i was able to run an SQL query as shown below to view the city closest to me and able to export the data from the database as well as the global data in years and average temperature.

The use of line chart was to visualize the trend of average temperature in the city Abuja to the global average temperature, where there was volatility in the spread of data i had to use the moving average temperature of 10 years for the global and the city of Abuja to create a smooth line for easy analysis:

DATA EXTRACTION

From the database i had to extract the temperature data of the world and as well as the city i live in.

- SQL query to extract the city list data i live in, exported to CSV

The SQL code below returned cities in the country i live and a proof that Abuja had a good number of data and closest when compared to the city i live Kaduna which had none.

```
SELECT*

FROM city_list

WHERE country LIKE 'Nigeria'
```

- SQL query to extract the global data, exported to CSV

From the SCHEMA I realized the City_data and Globla_data have the same column named Avg_temp, if i will be analyzing my city's average temperature to the global temperature in

the same table i would have to alter the columns for both cities average temperature and global average temperature. Below are the SQL codes:

ALTER TABLE city_data RENAME COLUMN avg_temp to CAT

ALTER TABLE global_data RENAME COLUMN avg_temp to GAT

Having renaming the columns the SQL codes below was used to merge the city_ data and global_data exported as a CSV file.

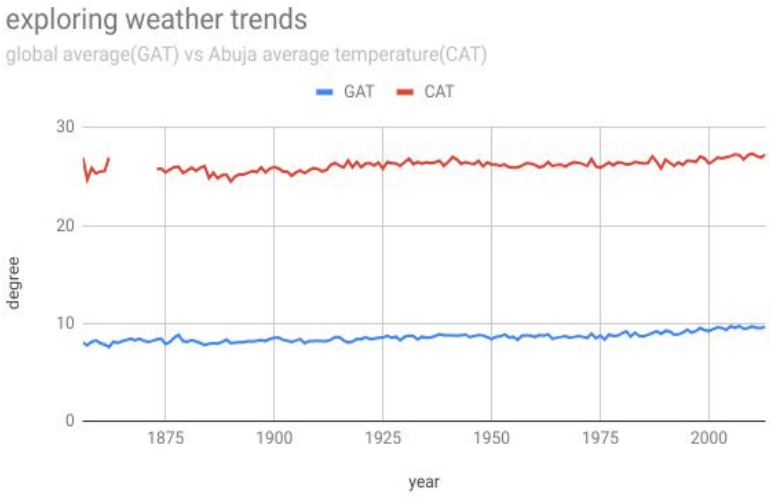
SELECT global_data.year, global_data.GAT, city_data.CAT

FROM global_data JOIN city_data

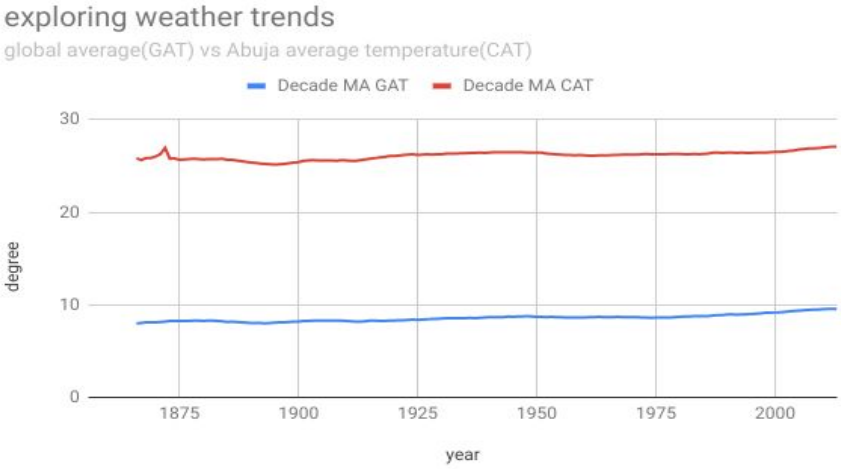
ON global_data.year = city_data.year

WHERE city LIKE 'Abuja';

CREATING A LINE CHART



A line chart created using google sheets.



A line chart for moving average temperature for 10 years.

FINDS

1. The average temperature globally when compared to the city of Abuja is relatively low were global average temperature is 8.85 degrees and Abuja is 26.14 degree celsius. The city of Abuja can be said to have a higher temperature compared to the the from the dataset given as regard to why? Can be further looked into with a more data as regards to location, activities and climate.
2. From the line chart graph shown above from the year 1856 to 2013 there have been a consistent rise in temperature both globally and in the city of Abuja .
3. The maximum temperature for the city Abuja recorded over the years was 27.35 degree celsius and for the global temperature was 9.73 degree celsius .
4. The minimum temperature for the city of Abuja recorded over the years was 24.48 degree celsius and for the global temperature was 7.56 degree celsius
5. For the most recorded temperature over the years for the city of Abuja was 25.93 degree celsius and for the global temperature was 8.73 degree celsius.

REFERENCES:

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