EXPLORE WEATHER TRENDS

UDACITY: DATA ANALYST NANODEGREE

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Ayush Ranjan

OVERVIEW:

I have taken out the information from the given database from the website and afterward examined the temperature around the world and contrasted it and my city.

STEPS:

TAKING THE DATA:

To check which nations and cities are accessible in the database.

SELECT * FROM city_list WHERE Country='India';

I found Patna as the closest city near my location in the query result.

To select data from the City database:

SELECT year,avg_temp FROM city_data WHERE city IN ('Patna');

I have got an option to download the CSV file after the query results were obtained. I downloaded the file as "results_Patna.csv".

To select data from the Global database:

SELECT year,avg_temp FROM global_data;

Again, I downloaded the CSV file after the query results were returned but this time with the name as "results_Global.CSV".
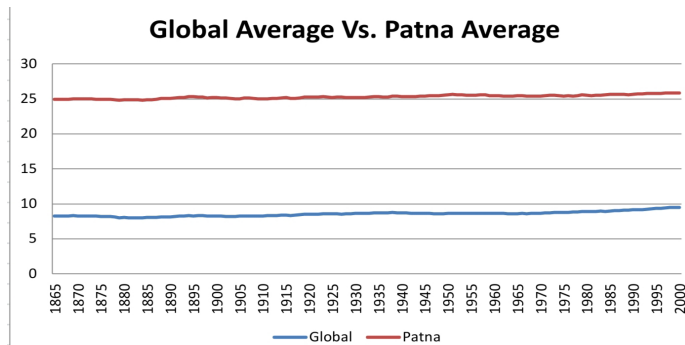
I merged the data of both the CSV files into one using MS EXCEL and did the next steps.

MOVING AVERAGE:

1. To smooth the information from CSV files and to notice the movements in the temperature.

2. I took the 10 year Moving Average of average temperatures to get the smooth line chart of both Global temperature and Patna average temperature.

3. I used the following function =AVERAGE(B2:B11) to get the Moving Average Value for

10 years of Patna and Global average temperatures.

PLOTTING THE LINE CHART:

Global Average Vs. Patna Average

OBSERVATION:

- Global Average Temperature for 10 year Monthly Average varies between 8.5°C to 9.8°C over a period of 130+ years.

- Patna city Average Temperature for 10 year Monthly Average varies between 25°C to 26°C over a period of 135 years.

- The Chart of Patna Vs Global has enormous variation in the temperatures.

- From the first half of the Chart, I observed global temperature is increasing from 8.5 very slowly and steeply but later it increased at a faster pace.From the second line in the Chart I noted that the average temperature of Patna was almost negligently till the first half but it started increasing noticeably in the second half of the time period.

- The final outcome of this project is that the average temperature of Patna is more than the global average temperature and the temperature is rising every moment as we spek due to the changes in the climate caused by us in the form of global warming and it's effect.