Data Analyst Nanodegree
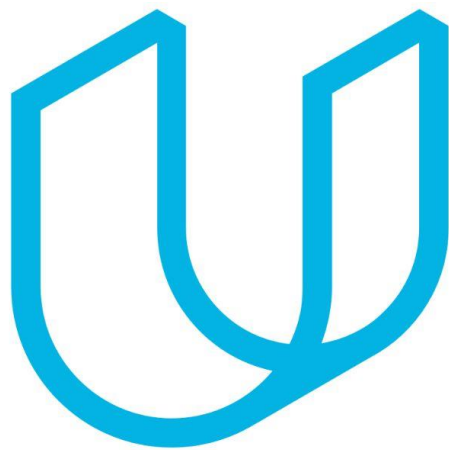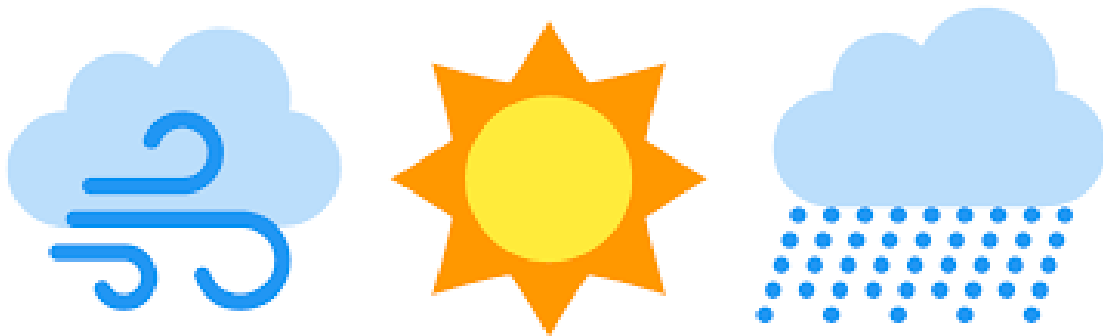
UDACITY

Explore weather Trends

By Aryan Sahu

Analysis:

CITY	SQL Commands for Extracting Data
To select the City in India	SELECT * FROM city_list WHERE country = 'India';
To select the City Data (Bangalore)	SELECT * FROM city_data WHERE country = 'India' AND city = 'Bangalore';
For Global Data	SELECT * FROM global_data;

Approach To get the desired data:

- I Copied the global data and CSV file of city to get the desired data for analysis.
- I Used Microsoft Excel for the analysis.

Moving Averages:

- To observe the trends in temperature I calculated moving average(MA).
- I used 9 years Moving Average to get the smooth line chart.

Excel commands for Moving Averages:

Moving Average	Excel Commands
For 9 years Moving Average	=Average(B2:B10)

Line Chart for Bangalore and Global Temperature:


Tempearture change in Bangalore and Globle 9-MA
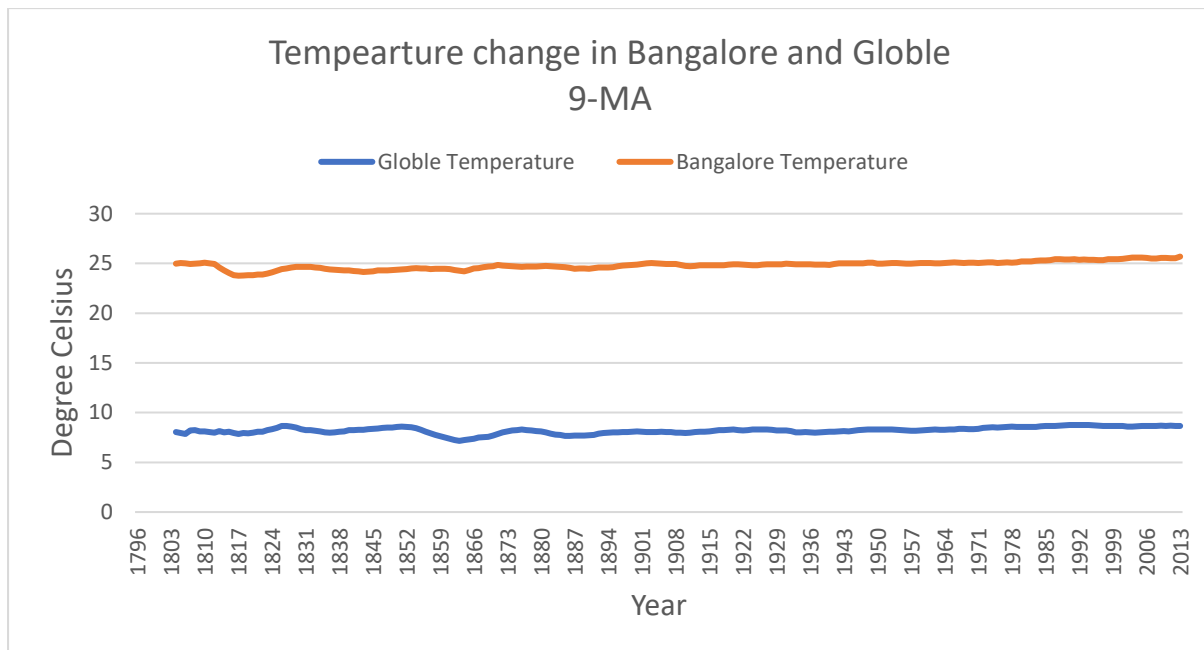
Observation:

- **Global** average temperature is varies between **7.15 to 8.67** Degree Celsius but **Bangalore** city average temperature is varies between **23.8 to 25.68** Degree Celsius.
- If comparing the Global average temperature and Bangalore average temperature then the **Bangalore city is hotter** then Global average temperature.

- Change in temperature over time:

Year	Change in Global average temperature	Change in Bangalore average temperature	Increasing/Decreasing over time
1804 - 1817	8.03 – 7.86	24.97 – 23.76	Decreasing
1864 - 1881	7.23 – 8.00	24.20 – 24.74	Increasing
1886 - 1903	7.66 – 8.03	24.55 – 25.02	Increasing

- According to the graph and above table the difference between Global average temperature and Bangalore average temperature is been **consistent over time**.
- Bangalore and Global average temperature have similar kind of trends. During early years, both trends seems to have ups and downs then approx. around **1992** the moving average temperature starts to **increase** at a steady rate.
- According to the graph the **world is getting hotter** because from 1804 to 2013 temperature is increases.

Conclusion Line Chart:
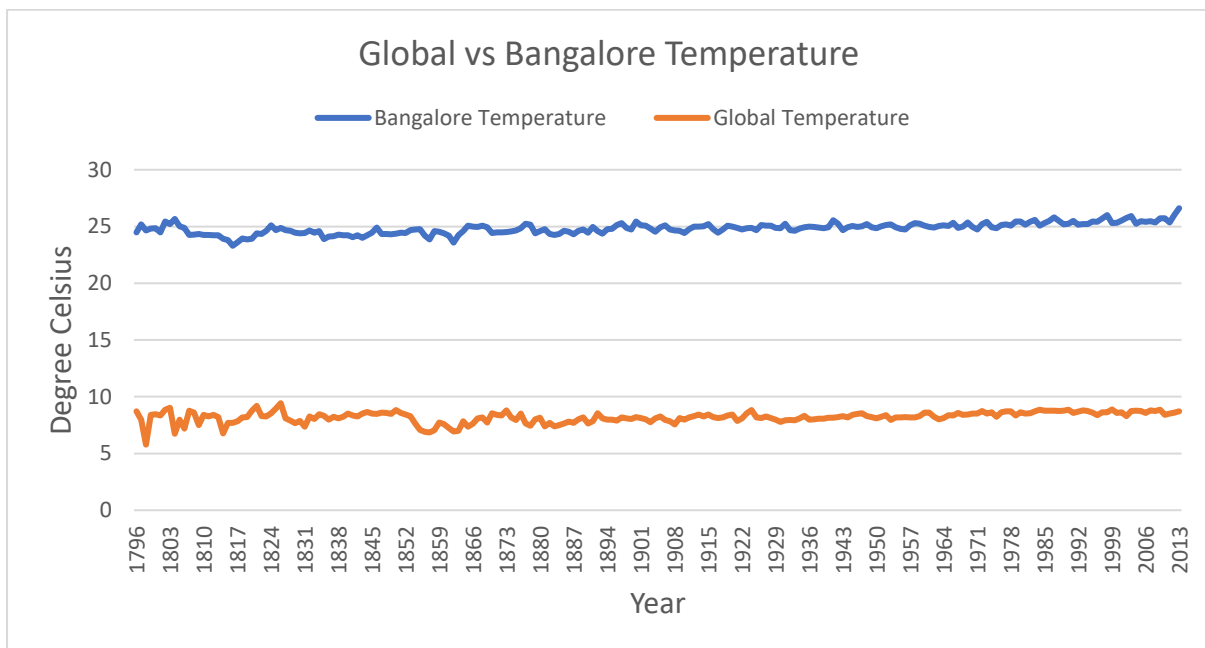
From This line chart we can see that eventually the graph is moving upwards which means the global temperature is rising which is directly proportional to increase in temperatures of the city.

Global Temperature ∞ Bangalore Temperature

Final Conclusion:

The World is Getting Hotter.