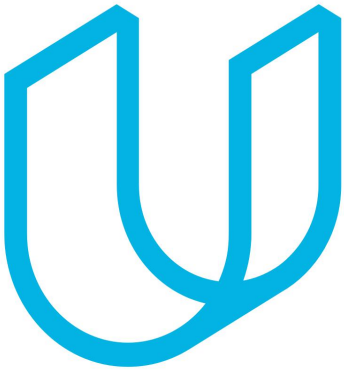
Udacity

Data Analyst Nanodegree



UDACITY

March, 2019

Explore Weather Trends

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March, 2019

Data Analysis :

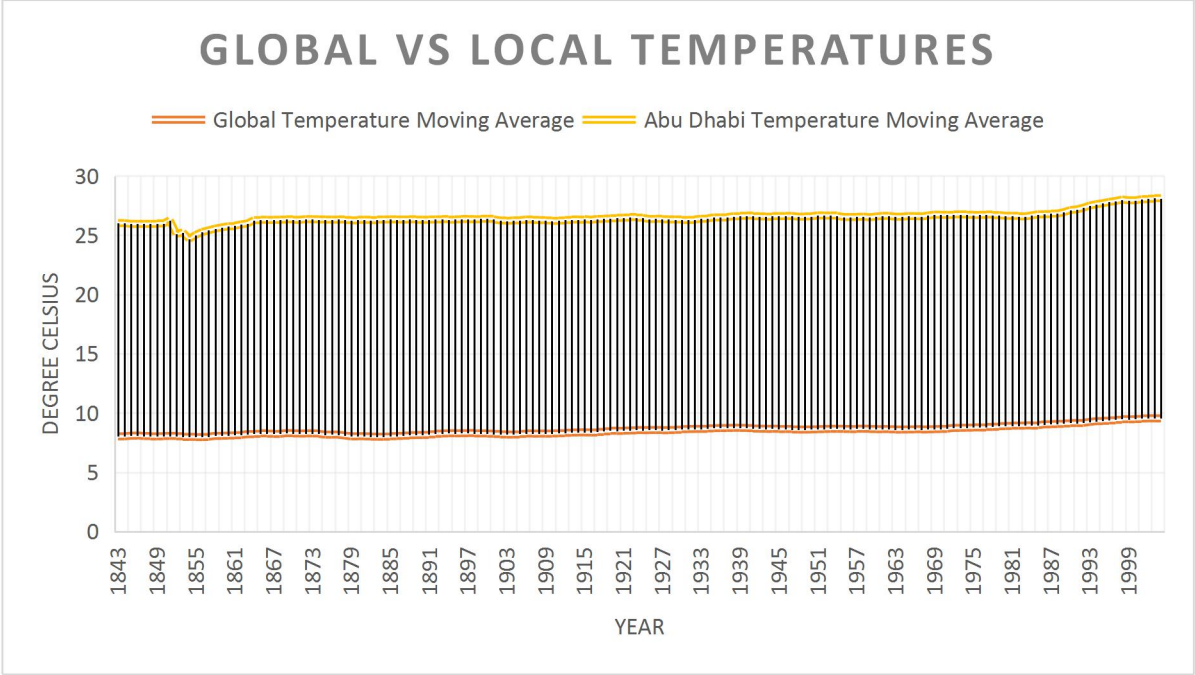
Purpose	SQL query used to extract data
To select the nearest big city	select * from city_list;
To select the city and the global temperature together	select g.year, g.avg_temp as global, c.avg_temp as city from global_data AS g INNER JOIN city_data AS c on c.year = g.year where city = 'Abu Dhabi';

Approach to get the desired data :
I exported the data as a csv format fie and I used Excel for the analyzing process.

Moving Average :
To observe the trends in temperatures I calculated the moving average for each 10 years.

Moving Average	Excel Command
For 10 years moving average	=AVERAGE(B2:B11)

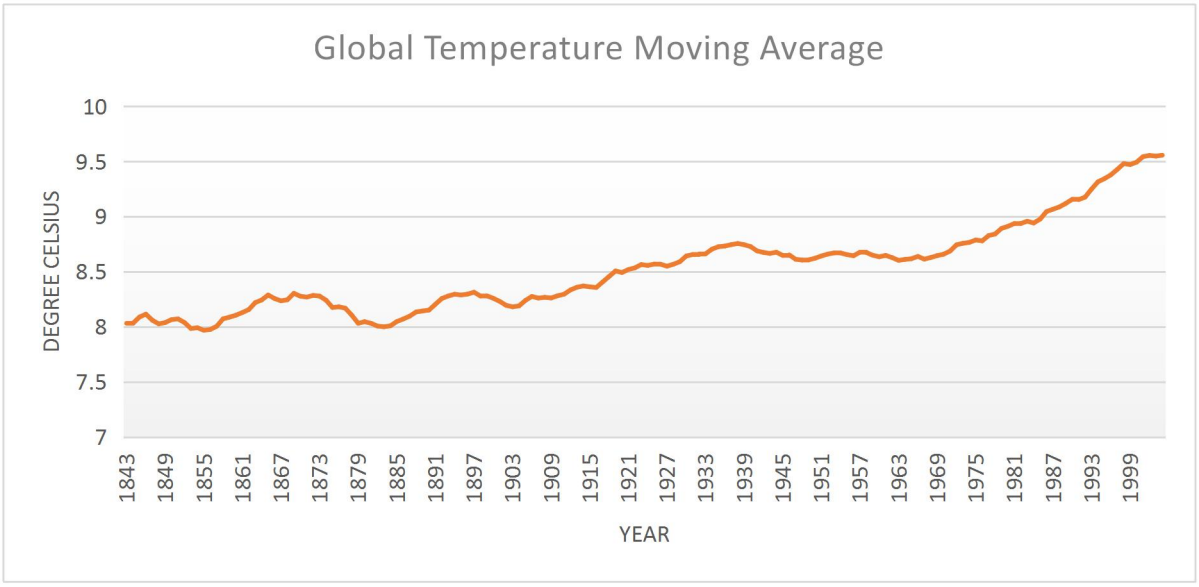
Line Chart for Abu Dhabi And Global Temperature



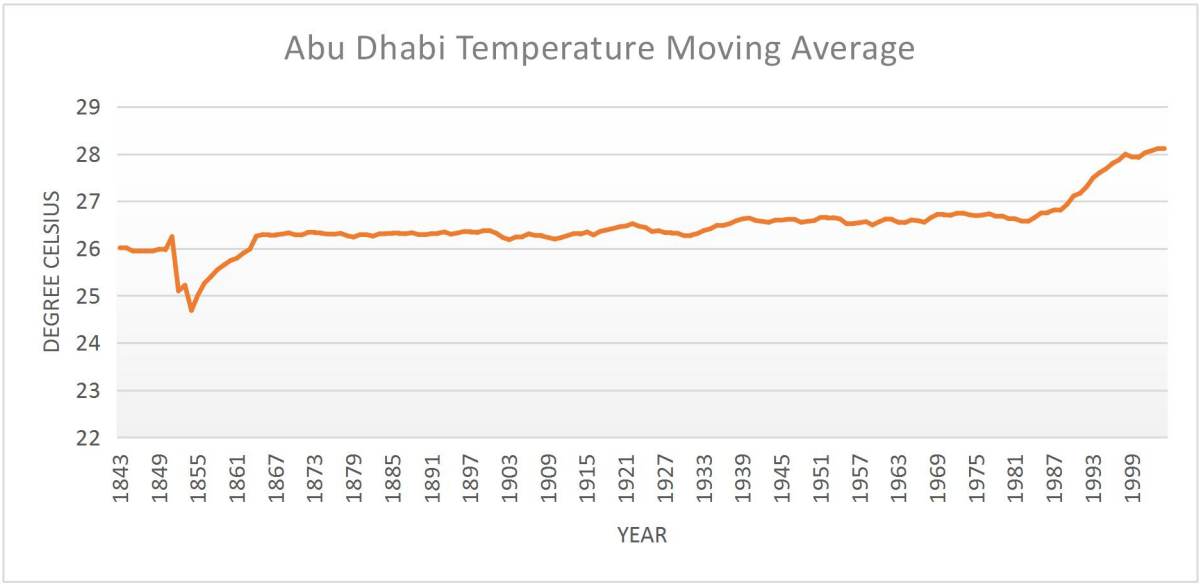
Observations :

- Abu Dhabi average temperature varies between 25 to 30 degree celsius while the global temperature varies between 5 to 10 degree celsius.
- Comparing the global temperature to Abu Dhabi's it's quite obvious that Abu Dhabi is hotter than the global temperature by nearly15 degree celsius.

Line Chart for Global Temperature



Line Chart for Abu Dhabi Temperature



- Change in temperature over the years :

Year	Change in Global average temperature	Change in Abu Dhabi average temperature	Increasing/Decreasing over time
1843-1855	8.3 - 7.9	25.94 - 24.68	Decreasing
1879-1897	8.0 - 8.31	26.24 - 26.36	Increasing
1903-1939	8.18 - 8.72	26.24 - 26.62	Increasing

- According to the above graphs and table the temperature changes been consistent over time.
- Both have similar kind of temperature trends, both had ups and downs in the early years, the moving average temperature been increasing at a steady rate during 1866 to 1984.
- According to the graphs the whole world is getting hotter since 1985.

Conclusion :
The world is getting hotter.