Project 1 – Date of submission Jan 18 2018

Exploring Weather Trends

Summary

In this project, you will analyze local and global temperature data and compare the temperature trends where you live to overall global temperature trends.

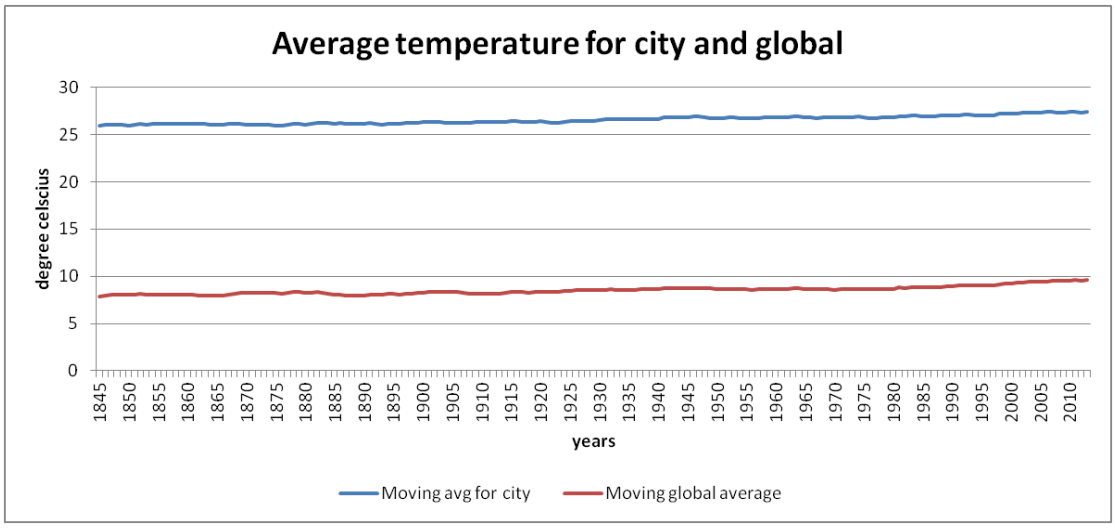
Steps taken to prepare the data:

1) Run the SQL query to collect the year and average temperature for the closed city I live in, which is Kuala Lumpur, Malaysia from 'city_data' table. Continuous data is available for Kuala Lumpur from 1839
   SQL:
   SELECT year, avg_temp from city_data
   WHERE city = 'Kuala Lumpur';

2) Export the average temperature for the city – Kuala Lumpur into .csv file
3) Run the SQL query to collect the year and average temperature of the world from 'global_data' table from 1839 since this has to be compared with the city temperature
   SQL:
   SELECT year, avg_temp from global_data

4) Export the global temperature into a csv
5) Compute the moving average for city and global by using the math function in excel – average over 7 days. The first row for moving average starts from 1845 for both city and global
6) Compare the moving average for city and global temperatures since 1845 until 2013 using a line chart in Excel.

Line chart



Observations from the chart

1) The average temperature for Kuala Lumpur is always higher than the global average temperature

2) Kuala Lumpur recorded the highest average temperature of 27.42 degree Celsius in the year 2013 whereas on a global level, the highest average temperature of 9.59 degree Celsius was recorded in 2011.

3) Over the span of 168 years (1845 – 2013), average temperature for Kuala Lumpur has increased by 1.49 degree Celsius, whereas for global, this was 1.76 degree Celsius.

4) The temperature of Kuala Lumpur on an average is roughly 3.12 times the global temperature over the years.

5) The ratio of the Kuala Lumpur city temperature to the global average is a negative slope indicating global warming. This suggests global temperatures have increased more than the city average temperature over the years.