

Outline –

- I used SQL to extract annual average temperature for Singapore and global, respectively. Please see chart 1, 2
- Used excel to open both csv files and calculate the 5-year moving average temperature for Singapore and global, respectively. Please see chart 3
- Used excel to plot the five-year moving average temperature for Singapore and global, respectively. Please see chart 4, 5.
- Interpret results. Please see the observation section

Chart 1: use SQL to get average temperature in Singapore by year, and download that to a csv file

Input		HISTORY ▾
SCHEMA	↻	1 SELECT * FROM city_data 2 WHERE city='Singapore'
city_data	▾	
city_list	▾	
global_data	▾	
		Success!

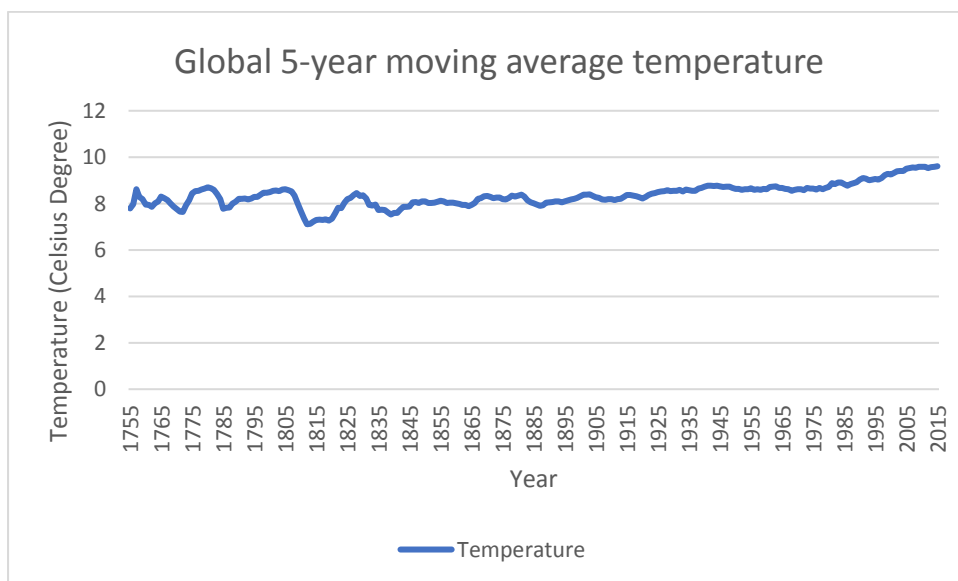
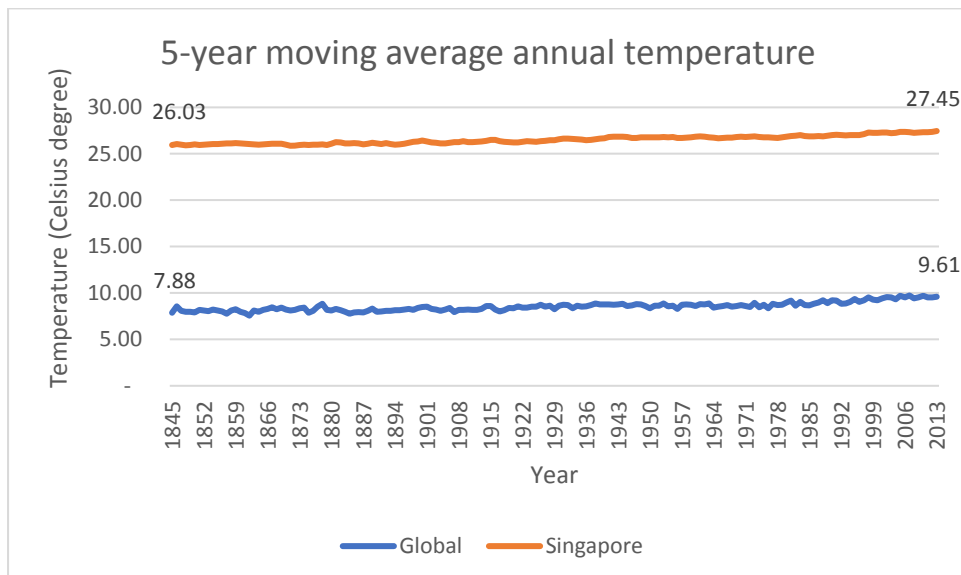
Chart 2: use SQL to get global average temperature by year, and download that into another csv file

Input		HISTORY ▾
SCHEMA	↻	1 SELECT * FROM global_data
city_data	▾	
city_list	▾	
global_data	▾	
		Success!

Chart 3: use excel embedded function to calculate moving average

SUM						
=AVERAGE(B3:B7)						
	A	B	C	D	E	F
1	year	avg_temp	5year_MA			
2	1750	8.72				
3	1751	7.98				
4	1752	5.78				
5	1753	8.39				
6	1754	8.47				
7	1755	8.36	=AVERAGE(B3:B7)			

Chart 4: 5-year moving average temperature for Singapore and global



Observations

- Singapore have been consistently hotter than the rest of the world.
- Singapore and global average temperatures have both increased since 1845.
- On global average data, the overall trend has been on the rise, but there was a sharp correction in the early 1800.
- Specific to Singapore, its average temperature increase is smaller than global average – between 1845 and 2013, Singapore's average temperature increased by 1.42 Celsius, and global average increased by 1.73 Celsius.