- **What tools did you use for each step? (Python, SQL, Excel, etc)**
  For analyse local and global temperature data and getting a moving average used excel. And compare the weather trends in Line chart format used Tableau.

  SQL Query:

  ```
  SELECT
  city.year,
  city.city,
  city.country,
  city.avg_temp,
  global.avg_temp as "avg_temp_global"
  FROM city_data city
  INNER JOIN global_data global
  on city.year = global.year
  WHERE city.city = 'Singapore'
  AND city.avg_temp IS NOT NULL
  ```

- **How did you calculate the moving average?**
  I used excel for this calculation, First create one column in excel file **ma_10_temp_city** where moving average would be stored, Now go to the cell of 10th ma_10_temp_city column and apply AVERAGE() function like below image

|	year	city	country	avg_temp	avg_temp	ma_10_temp_city
1	year	city	country	avg_temp	avg_temp	ma_10_temp_city
2	1825	Singapore	Singapore	26.43	8.39	
3	1839	Singapore	Singapore	25.79	7.63	
4	1840	Singapore	Singapore	25.89	7.8	
5	1841	Singapore	Singapore	25.98	7.69	
6	1842	Singapore	Singapore	26.14	8.02	
7	1843	Singapore	Singapore	26.22	8.17	
8	1844	Singapore	Singapore	25.73	7.65	
9	1845	Singapore	Singapore	25.62	7.85	
10	1846	Singapore	Singapore	26.45	8.55	
11	1847	Singapore	Singapore	25.88	8.09	=AVERAGE(D2:D11)

  10 Year Moving Average = AVERAGE(1st cell of avg_temp: 10th cell of avg_temp)

- **What were your key considerations when deciding how to visualize the trends?**
  In Chart X-axis should represent the year and Y-axis should represent the temperature. Green line should represent as global moving average temperature and red line as local moving average temperature.

- **Line chart** with local and global temperature trends

Global & Singapore temperature changes overtime
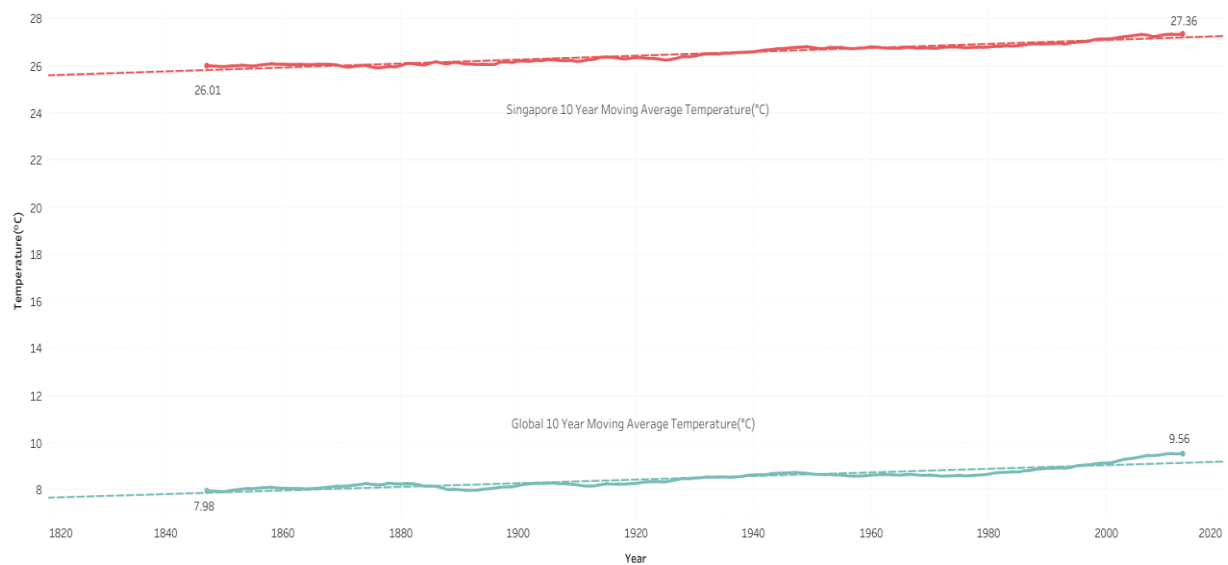
From this chart we get to know that

- Globally temperature increased year by year.
- Comparing to global temperature Singapore having higher temperature.
- Singapore temperature is around 25 to 32 °C humid and hot all the time.
- Year by year Singapore temperature increased around 5% where as the global temperature increased around 20%.
- Using this chart, we can predict that next decade will be hotter if we are not able to manage or control of global warming.