

Steps taken to prepare the data:

1. SQL Queries:

```
SELECT year,avg_temp FROM global_data;
```

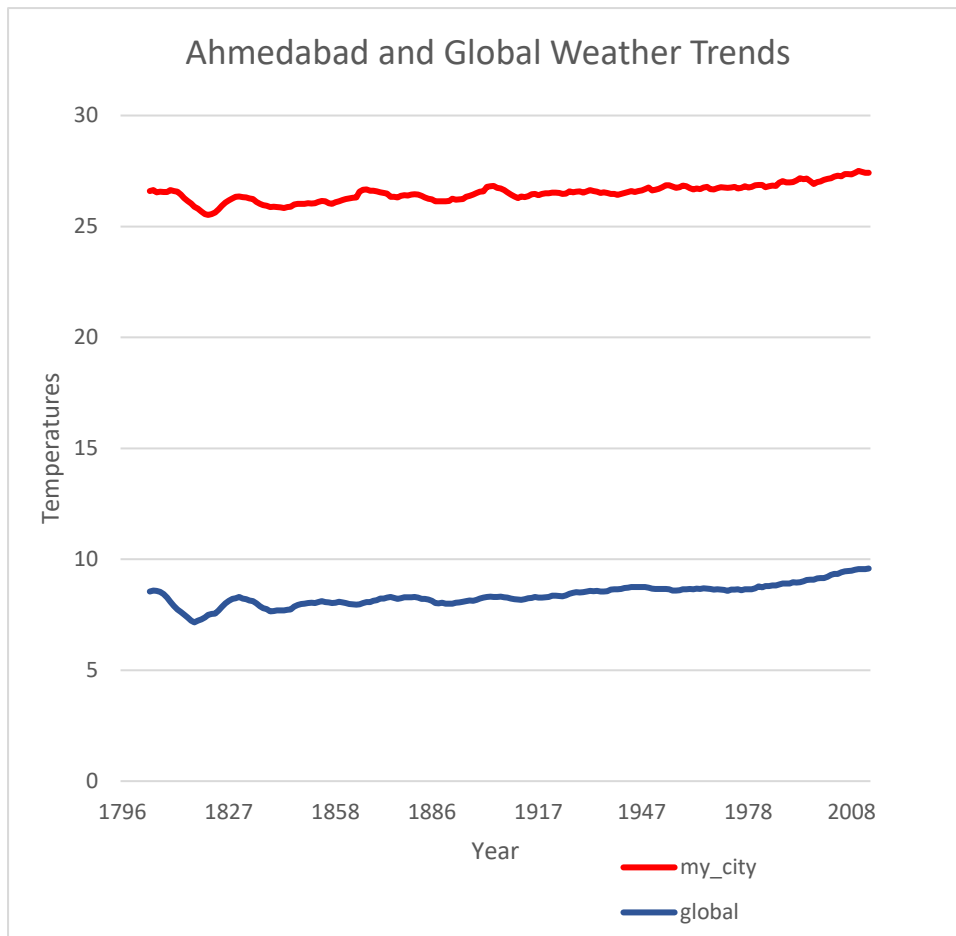
```
SELECT city,country FROM city_list  
WHERE country='India'
```

```
SELECT year,avg_temp FROM city_data  
WHERE city='Ahmadabad'
```

(Note: Ahmadabad is the biggest city near to my city.)

2. Both the above results are downloaded as csv files and the tool used for it is Microsoft Excel.
3. There is a mismatch in the years of both my city and global data. Global data has more records. So, the starting year of my city is considered for our analysis.
4. Some data is missing for my city. The mean is calculated and the missing data is supplied the mean. This will result in completely filled data without any null values.
5. 9 year moving average is calculated for my city temperatures and global temperatures.
6. 9 year moving average is considered in order to smooth the data. The trend is effectively captured in this.

Line Chart of the temperatures of my city, Ahmadabad and the global:



Observations:

1. My city, Ahmedabad is far hotter than in the global trend and is consistent over time.
2. In the long run the world is getting hotter with slight increasing pace after the 1990s.
3. After the 90's there is clearly more pronounced uptick in the temperature compared to earlier ones. The shape of the curve is having a slight pronounced upward slope.
4. The upward trend started in the 19th century and this can have a direct relationship with industrialization and the burning of fossil fuels.
5. Both the line some what looks parallel slanting upwards.

Snapshot of the excel data(some initial years only)

year	my_city_temp	my_city_moving_avg	global_temp	global_moving_avg
1796	26.35		8.27	
1797	27.45		8.51	
1798	25.82		8.67	
1799	26.62		8.51	
1800	26.56		8.48	
1801	25.73		8.59	

1802	27.01		8.58	
1803	26.77		8.5	
1804	27.09	26.60	8.84	8.55
1805	26.67	26.64	8.56	8.58
1806	26.57	26.54	8.43	8.57
1807	26.1	26.57	8.28	8.53
1808	26.53	26.56	7.63	8.43
1809	26.53	26.56	7.08	8.28
1810	26.53	26.64	6.92	8.09
1811	26.53	26.59	6.86	7.90
1812	26.53	26.56	7.05	7.74
1813	25.92	26.43	7.74	7.62
1814	25.26	26.28	7.59	7.51
1815	25.45	26.15	7.24	7.38
1816	25.01	26.03	6.94	7.23
1817	25.23	25.89	6.98	7.16
1818	25.78	25.80	7.83	7.24