Project: Explore Weather Trends

Summary

Analysis of local and global temperature data followed by comparison of the temperature trends of the city of residence to overall global temperature trends.

Objective

Create visualization and a write-up on the similarities and differences between global temperature trends and local city temperature trends

Procedure

The steps followed for the analysis of the data details provided:

1. **Data extraction** – Download the temperature data for the world and the local city/city of residence in CSV format. SQL queries executed –
    - SQL query to extract the city level data

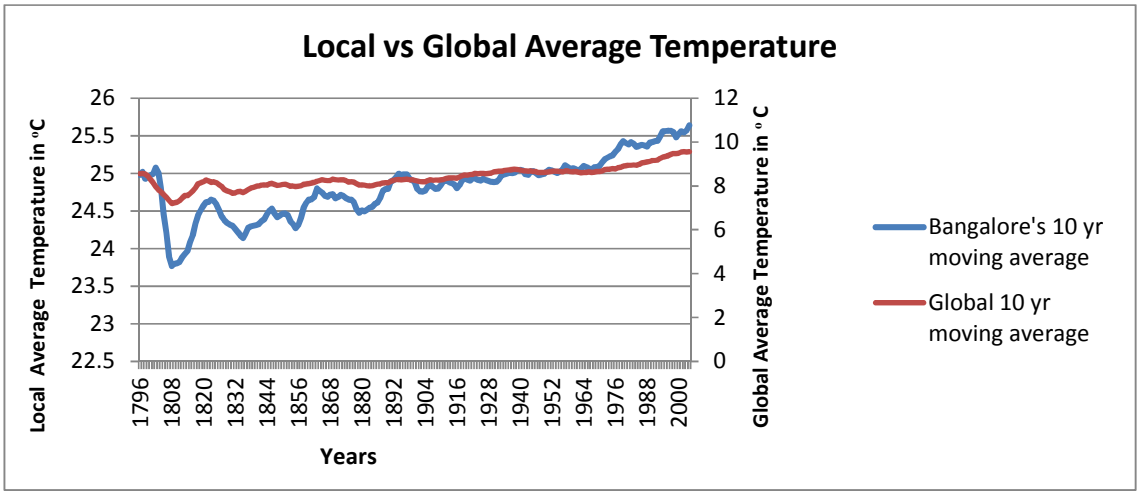
      ```
      SELECT * FROM city_data WHERE city ='Bangalore' ;
      SELECT * FROM city_data;
      ```

    - SQL query to extract the global data.

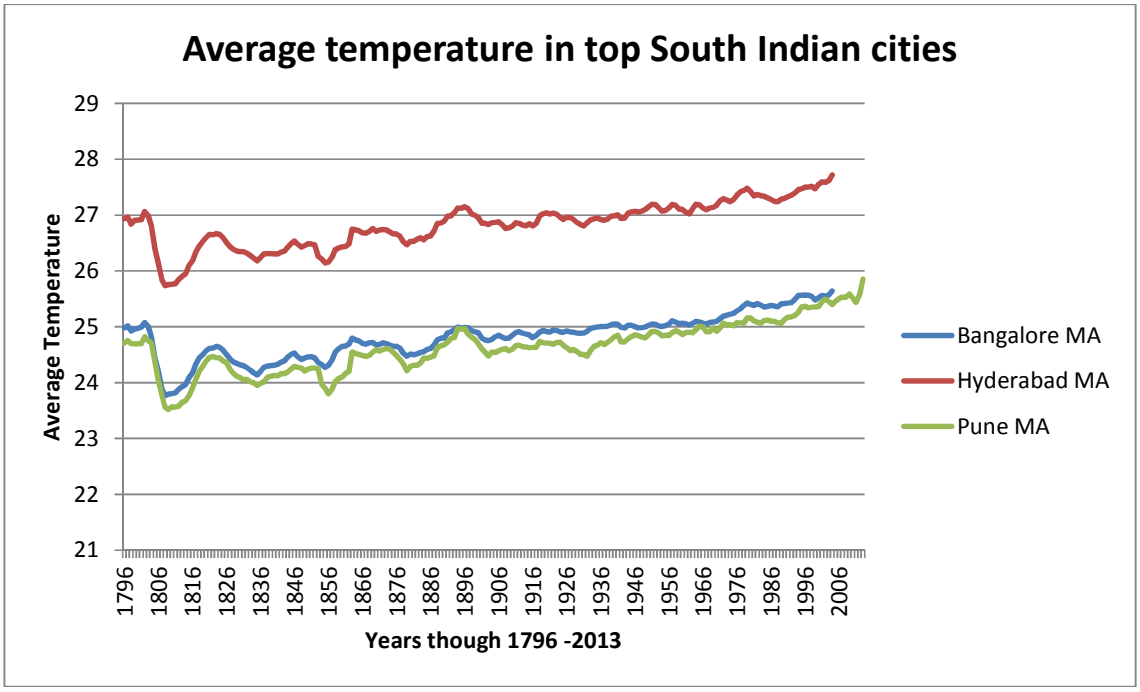
      ```
      SELECT * FROM global_data;
      ```

2. The CSV file has been worked in Excel.
3. **Data Manipulation** – Moving average for a period of 10 years is considered. The data for local city start from the year 1796 while the global data has average temperature data from 1750. For comparison, moving average temperature has been considered from 1796.

4. **Graphs** – Line charts comparing local vs global average temperature and average temperature trends in top south Indian cities have been plotted.



Graph 1.



Graph 2

5. Observations –

- Graph1 shows the local temperature higher than the global average temperature with the overall trend of increase in temperature.
- Big drop in the temperature in the late 1700's and through early 1800's can be observed and the fluctuation is noticeable till first decade of 1900, post which the changes were minor and gradually see a climb towards higher temperature. This is reflected in global average temperature, only that we see a marked change in the local average.
- The above change can be observed in Graph 2 where 3 south Indian cities have been considered. The drop in the temperature in first decade of 1800, seventual reduction in big fluctuations but gradual increase in temperature.
- Though the global average is lower, the hotter cities would literally feel the heat, as the temperatures are on the higher side.