

Exploring Weather Trends

- In this project, I have analyzed local and global temperature data and compared the temperature trends of Pune city, India to the global temperature trends.
- For data Extraction I used SQL.

Following are the queries I used for extracting Global Data, City Data, City List

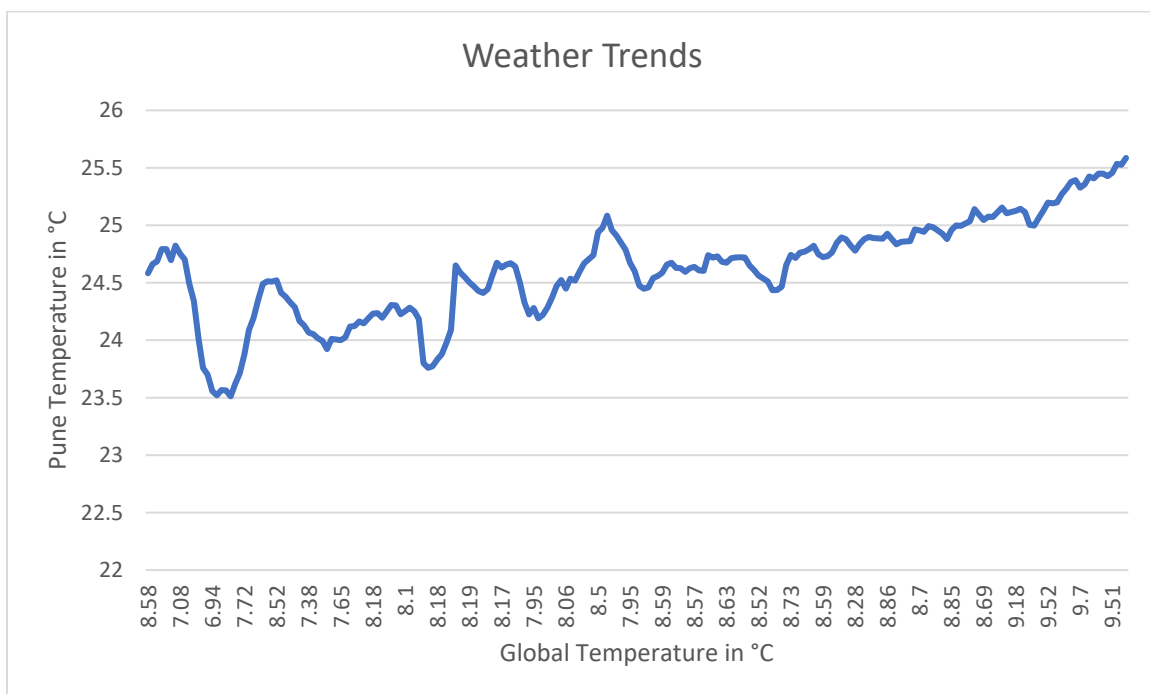
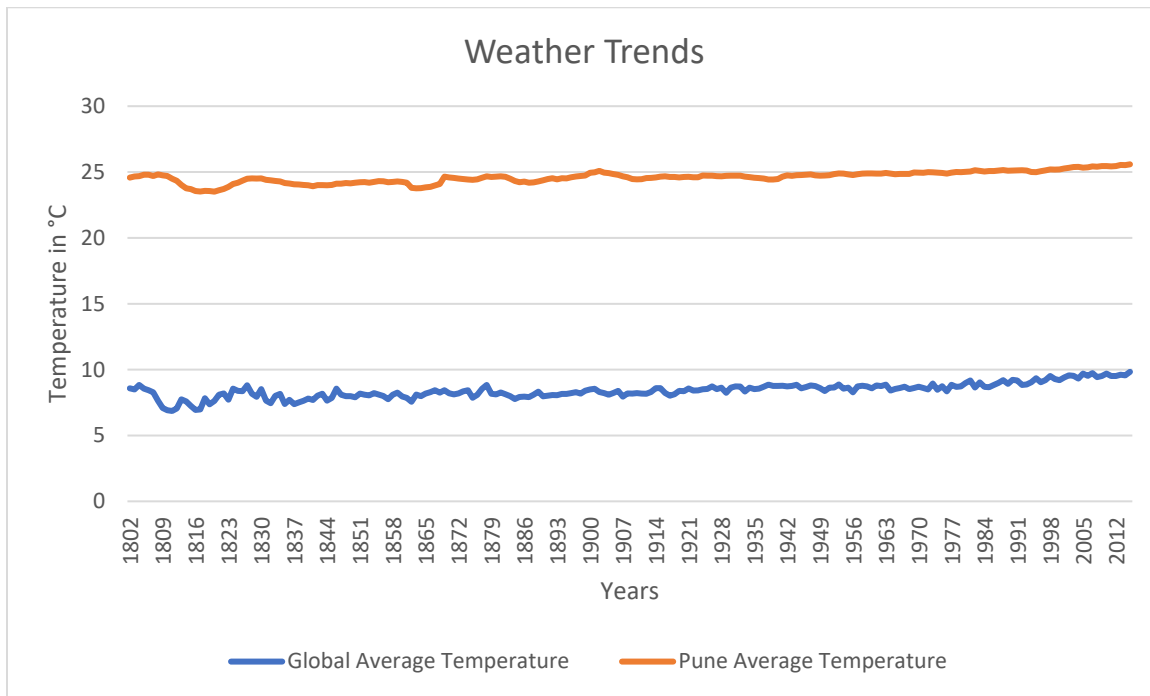
```
SELECT *  
FROM global_data
```

```
SELECT *  
FROM city_data  
WHERE city IN ('Pune','Philadelphia','Paris')
```

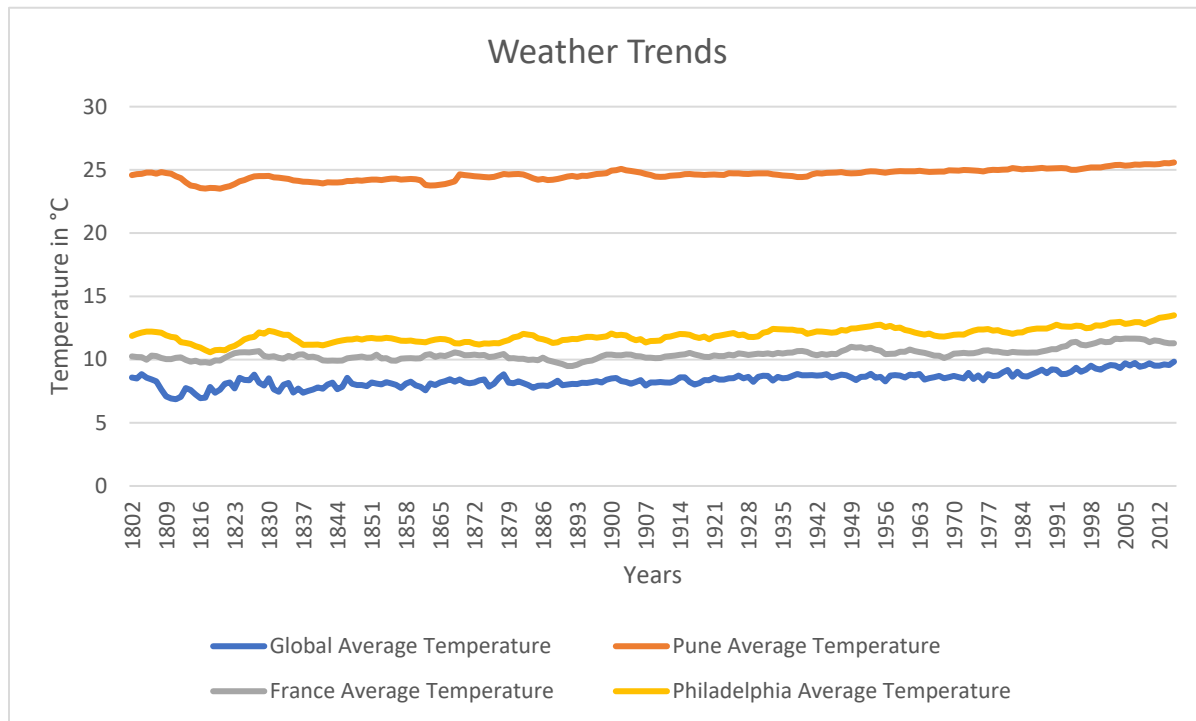
```
SELECT *  
FROM city_list
```

- For comparison I selected Pune city, India
- I have done the comparison with the help of Microsoft Excel.
- Study includes years from 1796 to 2013 (217 Years).
- Moving Average is calculated for every 7 years.

LINE CHARTS:



This Line Chart shows comparison of Global Temperature with Pune, France, Philadelphia.



OBSERVATIONS:

- If I compare temperature of Pune city to the global temperature, the temperature of Pune is approximately two to three times more than an average.
- Approximate temperature of Pune over the years has been changed from 23.5°C to 25.5°C whereas global temperature has been changed from 7°C to 9.5°C

- The lowest temperature observed globally was 7°C in the year 1809 & the corresponding temperature in Pune for the same year(1809) was 24.5°C .
- The highest temperature observed globally was 9.51°C in the year 2012 & the corresponding temperature in Pune for year 2012 was 25.5°C .
- I have also visualized temperature of multiple cities which includes Pune, France, Philadelphia. Temperature has increased in all the mentioned cities over the years.
- Graph includes details of over 217 years and it shows the world is getting hotter.
- I have also calculated Pearson's correlation coefficient which is 0.919708 for Global Temperature & Pune City's Temperature, It shows the global Temperature & Pune's Temperature are Linearly correlated and as global Temperature has increased, Pune's temperature has also increased.