UDACITY

Data Analyst Nano-Degree

PROJECT 1

Exploring Weather Trends

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Exploring Weather Trends
Global & Local Average Temperatures

In this project, the main objective is to analyze the weather trends compared between the global average temperatures and the local ones. In our case, the local average temperatures would be retrieved for Riyadh city, the capital of Saudi Arabia, as it is the nearest for us.

Steps:

1. **To obtain the required data, an SQL statement was written to extract data of the average temperatures of Riyadh.**

```
SELECT *
FROM city_data
WHERE city LIKE '%Riyadh%'
   AND year BETWEEN 1852 AND 2013
```

2. **To extract the global temperatures from the "global"_data", the following SQL statement was used.**

```
SELECT *
FROM global_data
WHERE year BETWEEN 1852 AND 2013
```

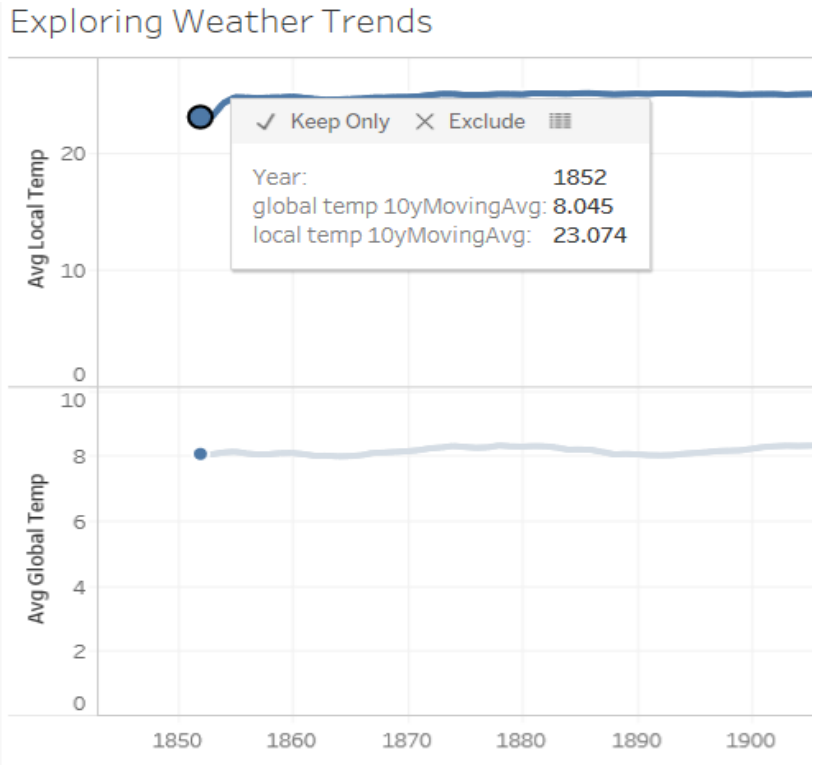
Note: the WHERE clause was used to filter results and limit the comparison to the years in which we have a recorded data for Riyadh City.

3. **After extracting the required data, the moving average for the temperatures was calculated to smooth the line plot and make it easier for comparison. The moving average was calculated for periods of 10 years.**

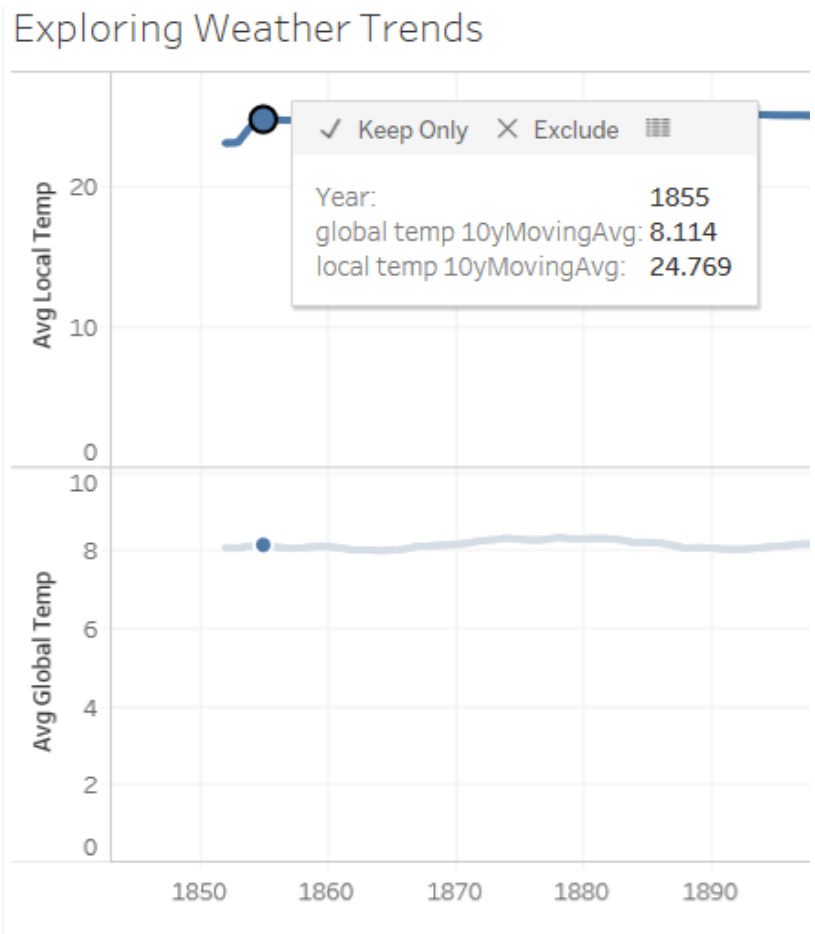
4. **The visualization part came next to explore the trends and report the founded insights. The tool used for this part was Tableau.**

Observations:

1. **Starting in the year of 1852, the local average temperature was on its lowest degree but higher than the global one with a difference of 15.029 °C.**



2. **After 3 years, the local average temperature has increased rapidly in a distinguished spike compared to all the recorded years.**



3. **Throughout the years between 1975 and 2000, the global and local average temperatures kept growing successively with minor decreases in some years.**

4. **On the year of 2013, both the average local and global temperatures reached to their peak values 26.650 °C and 9.556 °C respectively. The overall difference between the increased temperatures in 2013 and 1852 are 1.511 °C for the global temperatures, and 3.576 °C for the local.**

Click here to find the interactive visualization.