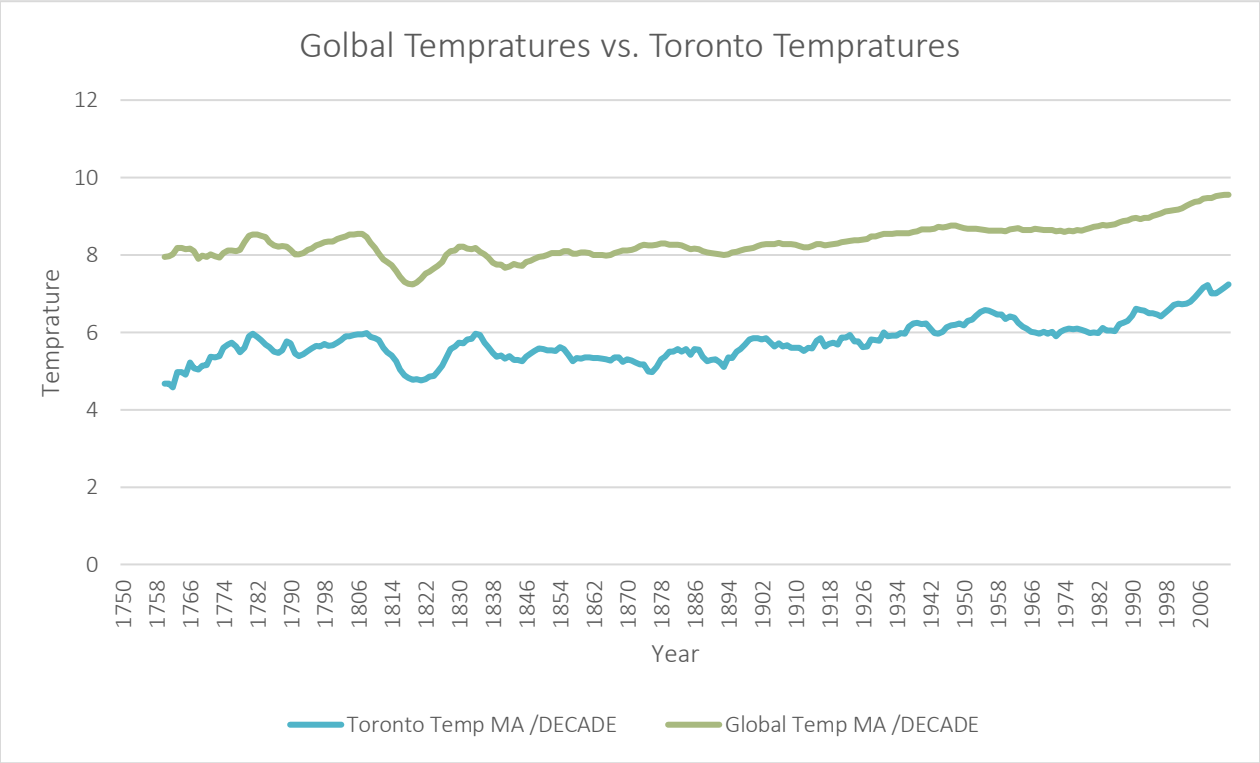
Weather Trends Exploration

Sakina Fakhruddin



The above chart was the result of the data analysis

Data Extraction

The following SQL query was used to extract global data: Select * from global_data;

The following SQL query was used to extract local data: Select * from city_data where city = 'Toronto';

Data Manipulation

The data set was cleaned first. This included deleting temperatures of any year that was not available for both sets of data such as global temperature data which was available till 2015. However, since Toronto temperature was available till only 2013, the years 2014 onwards are not considered for the visual

Moving averages were calculated by decade i.e. 10 years. The visual was then made using the moving averages.

Data Conclusions

1. Toronto temperature has always been an approx. 2-3 degrees below the global temperature with min temp being 4.58 and 7.24 degrees and max temp being 7.24 and 9.55 degrees.
2. However, we see an overall increase in the average temperatures with global temperature reaching 10 degrees from 8 degrees and Toronto temperatures reaching 7 degrees from 5 degrees.
3. We can see that Toronto temperatures are more volatile, with erratic dips and increases in temperature such as in 1762-1781 and 1876 and 1893
4. The correlation coefficient is 0.908 which highlights that Toronto temperatures are highly associated with the global temperatures.