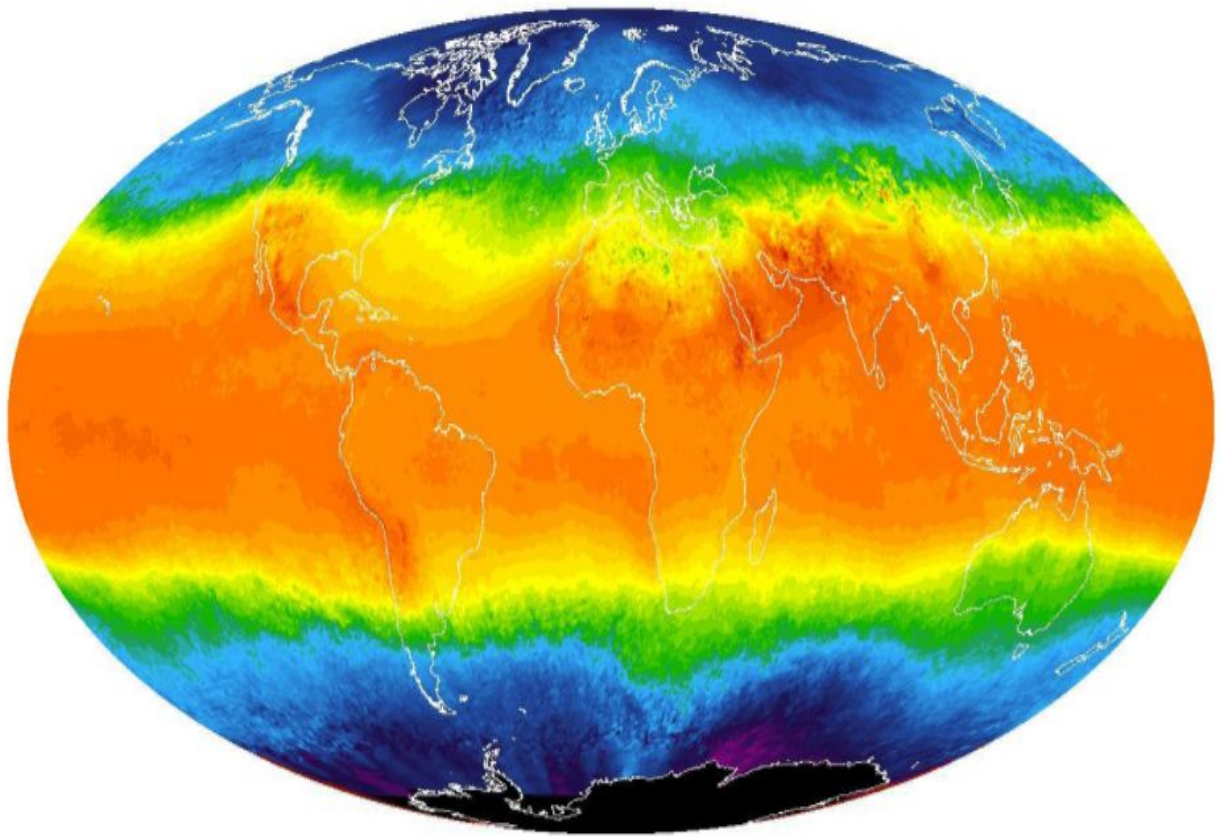


Exploring Weather Trends



Goal

This project was created to analyze local and global temperature data and see how local trends compare to global ones.

Scripts

1)

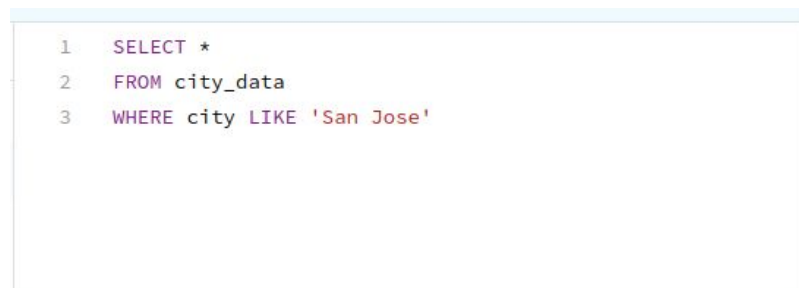


```
1 SELECT City
2 FROM city_list
3 Where city LIKE 'San%'
```

Success!

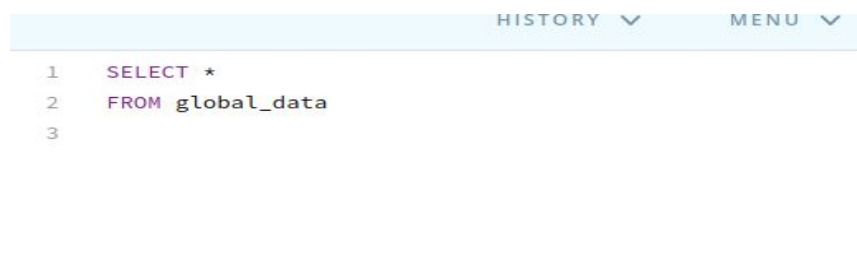
EVALUATE

2)



```
1 SELECT *
2 FROM city_data
3 WHERE city LIKE 'San Jose'
```

3)



```
1 SELECT *
2 FROM global_data
3
```

Method

Since this was a previously unknown data set the first step was exploratory. I was reasonably sure that the database would not contain my exact city, Fremont, California, I was absolutely certain it would contain San Francisco and pretty confident it would contain San Jose, so I queried the database with a LIKE statement for 'San%'.

Along with several other results San Jose appeared, and proceeded to export the data set for San Jose from the 'city_data' table along with the 'global_data' table (Images 2 and 3) into CSV file(s) and import them into Google Sheets.

My first step in google docs was calculating the Moving Averages to smooth out the data by reducing any yearly volatility and make it easier to observe long-term trends. I also noticed a discrepancy between the start dates and end dates San Jose table started in 1849 and ended in 2013 while the Global Data Set started in 1750 and ended in 2016, so I equalized the start and end dates before creating the visualizations.

Visualizations

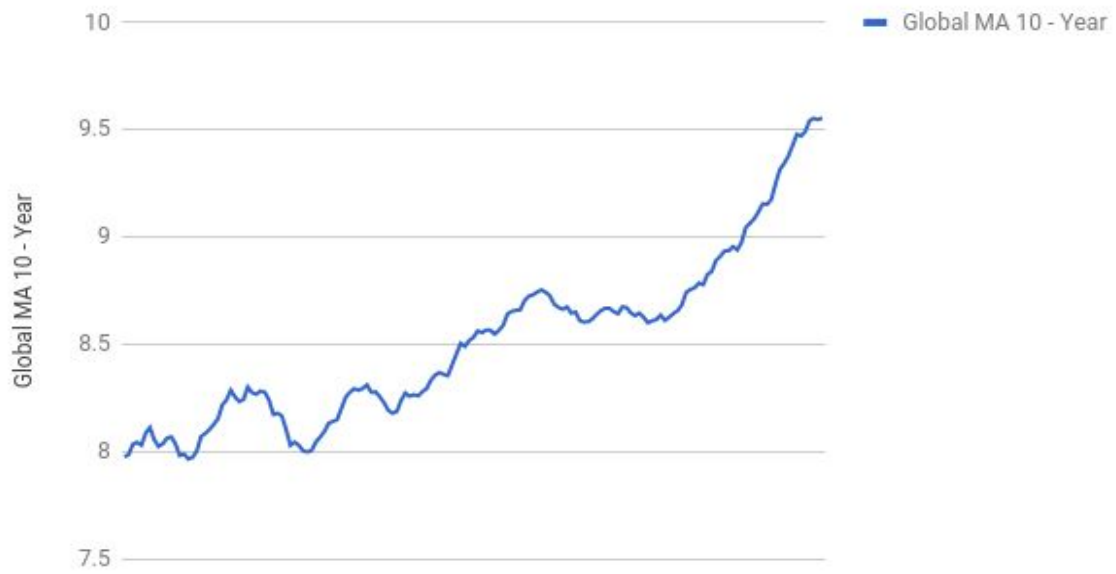
1)

Global MA 10 - Year and San Jose MA 10 Year



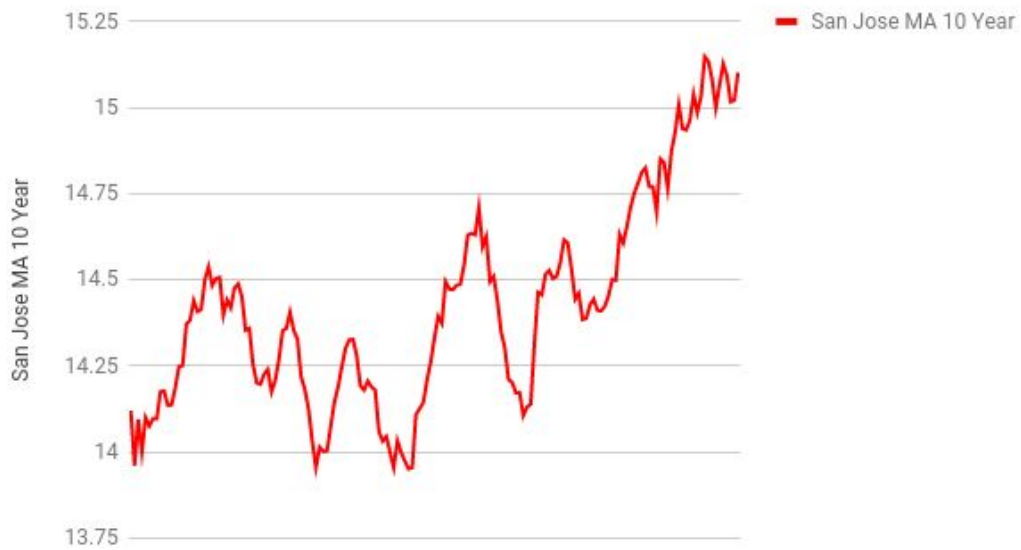
2)

Global MA 10 - Year



3)

San Jose MA 10 Year



Analysis

Overall, San Jose is quite a bit warmer than the global temperature by roughly six degrees celsius. The difference is large enough where comparing the the trends in one graph is generally unhelpful, so i also included separate graphs. Globally the average temperature rose 1.5 degrees celsius since 1850, while the average temperature in San Jose rose by little over 1 degree celsius. Moreover, the temperature in San Jose is much more volatile year-to-year, spiking by half-a-degree during certain periods.