Scott Jue
6/19/2018

Steps Taken to Prepare the Data:

I used the Database Schema in the class portal to query the data I needed so that I could export it into a CSV file. I used the below SQL queries to come up with the data for San Diego and the world.

1) **San Diego Data Query:**

```
SELECT *

FROM city_data

WHERE city='San Diego';
```

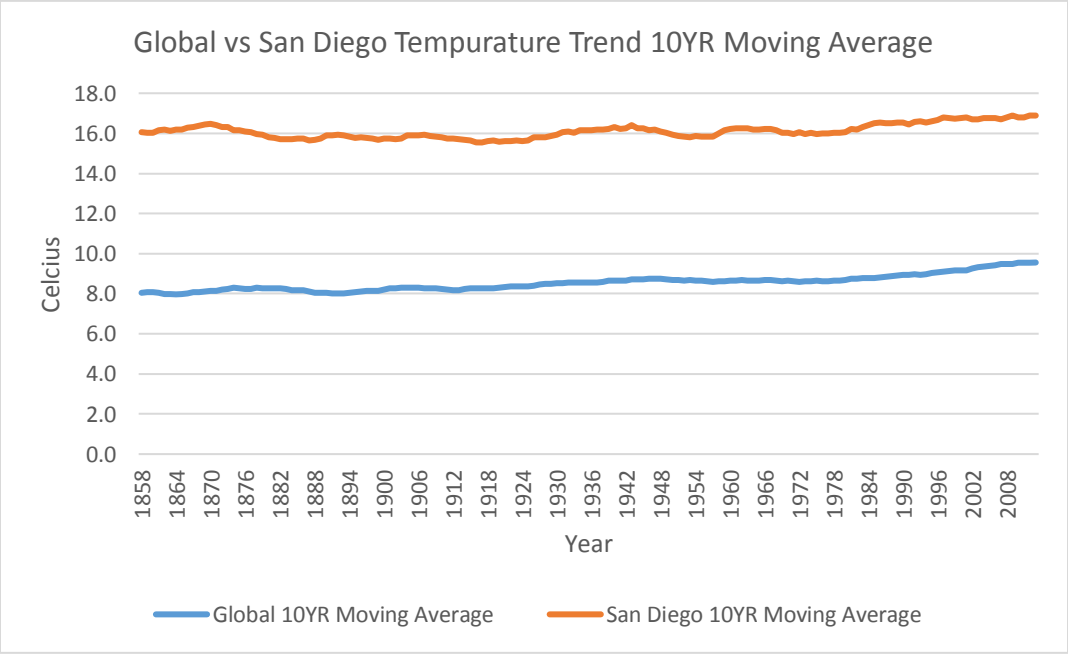
2) **Global Data Query:**

```
SELECT *

FROM global_data;
```

After extracting the CSV files, I used Excel to calculate a 10 year moving average by using the AVERAGE function at each year for the prior 10 years. Then I created a stacked line chart to visualize the data. Additionally, I only chose to use data from 1858-2013 as those are the years where record was recorded for both locations. There is data recorded before 1858 for the globe but not San Diego. So in order to focus is on the comparable years, I omitted part of the Global data.

Line Chart:



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Observations:

Observation 1

San Diego is hotter on average compared to the global average. San Diego's 10 YR AVG is roughly double the Global 10 YR AVG and this difference is consistent over time.

Observation 2

The changes over time in San Diego show an increase in temperature over time. The Global 10YR Moving Average exhibits a similar trend of increasing temperatures over time. There is a slight positive correlation between the two trend lines.

Observation 3

The overall trend shows that the world is getting hotter and has been consistently increasing over time. However it looks like the last 30 years shows that the 10YR AVG temperature for both San Diego and the world have seen increased temperatures at a more rapid rate as the slope of the line is greater than the past hundred years or so.

Observation 4

Although bot datasets show an increasing temperature trend, San Diego 10YR AVG data is slightly more volatile than the Global 10 YR AVG data as there are more up and down movements over time. The Global data trend line has a smoother line and therefore has less temperature fluctuations over time.