

Project 1: Explore Weather Trends

Outline of the steps taken to retrieve the final line chart:

- SQL queries to extract both city level data and global data from the database provided and export to CSV

```
select year, avg_temp from city_data where city= 'Washington' and country=
'United States';
```

```
select year, avg_temp from global_data;
```

- Open the two CSV files in Google Sheets and calculate the 20 year moving average from 1750-2013 given that both the city level and global data in this range provide very few missing averages. (The moving averages are from 1770-2013) A 20 year moving average is reasonable enough to observe this long-term trend without showing great volatility but just enough detail.
 - Create a new column next to the avg_temp column to store the moving average temperature values. Click the cell to the right of the avg_temp of interest then use AVERAGE() function and drag the cursor down to the 20th cell to find the moving average.
- Create a line chart that compares the moving averages of both the city level and global temperatures.
 - Transfer the city and global data to one Google Sheet. Highlight the entire Google Sheet and select the chart icon. Remove local and global moving averages under “Series”. Then add a “vertical axis label” and rename the line chart. Adjust the fonts of the title and axis.

My observations about the world and my city’s temperature averages:

Washington is hotter on average compared to the global average. The difference has been consistent over time (approximately 3-4°C). In fact, my city’s temperature fluctuations mirrors that of the global trend. The overall trend is that the world is getting hotter. Furthermore, both my city’s temperature and global temperature are increasing overtime.

20 Year Moving Temperature Average

