

Below sections summarize the steps taken to complete DAND's Project 0: Exploring Weather Trends

Extract the Data:

- The closest big city I live next to is Riyadh, Saudi Arabia. The following SQL lines of code were used to see if Riyadh is part of the dataset:

```
/* Identifying available cities within Saudi Arabia*/
```

```
SELECT *
```

```
FROM city_list WHERE country = 'Saudi Arabia'
```

Riyadh happens to be part of the weather dataset.

- Riyadh data were extracted and downloaded using the following lines of code:

```
/* Extracting Riyadh Data*/
```

```
SELECT *
```

```
FROM city_data WHERE city = 'Riyadh'
```

- The global data were extracted using the following:

```
/* Extracting global Data*/
```

```
SELECT *
```

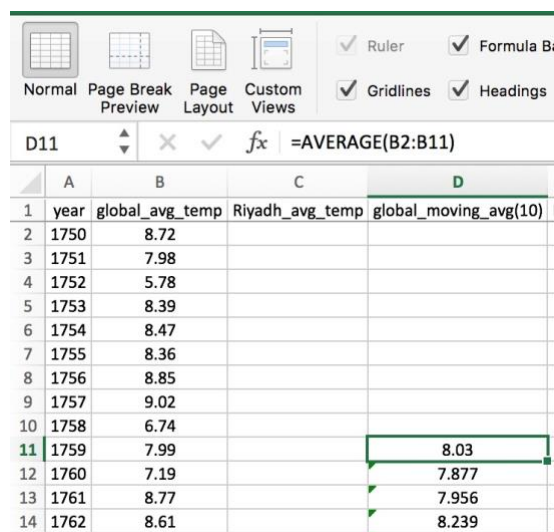
```
FROM global_data
```

Open up the CVS:

MS Excel has been used for this project for calculation and plots generation purposes.

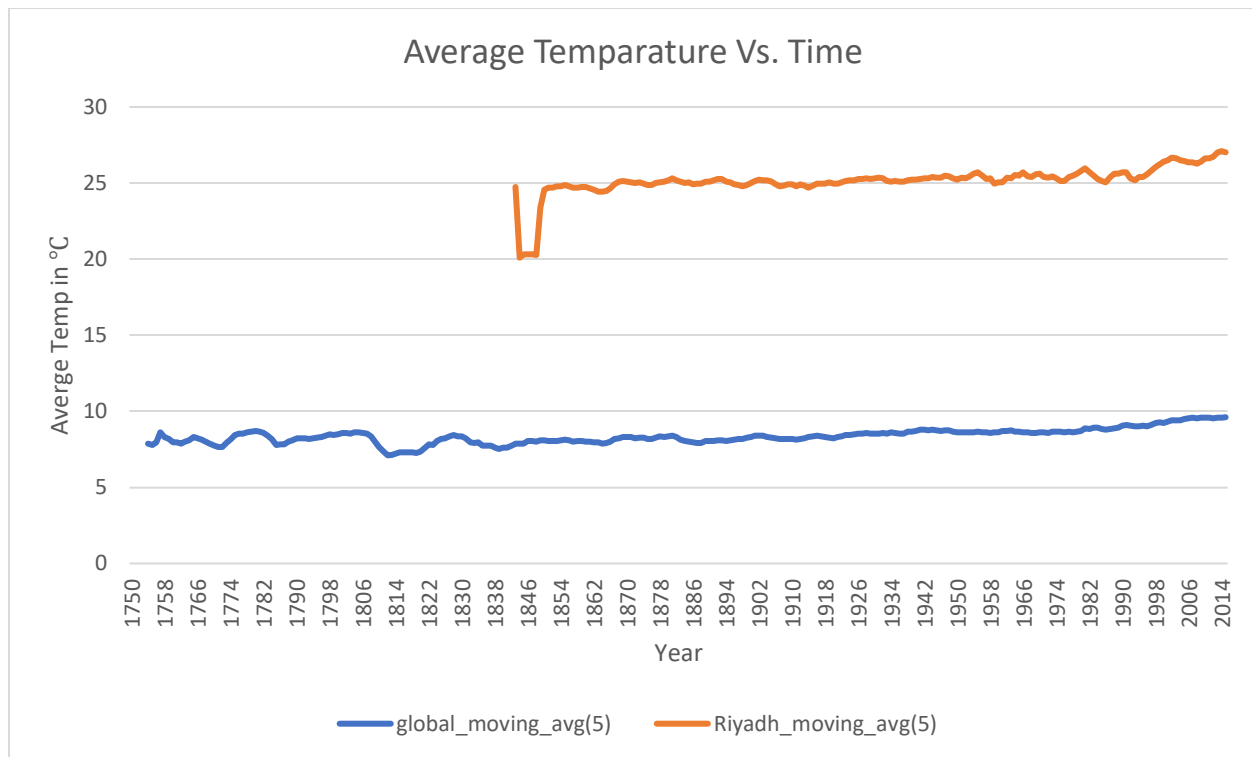
Create a Line Chart:

A moving average of window-size of 10 has been used to smooth out the global and my city, Riyadh, average temperatures.



The screenshot shows the Microsoft Excel interface. The formula bar at the top displays the formula `=AVERAGE(B2:B11)` for cell D11. The spreadsheet has four columns: A (year), B (global_avg_temp), C (Riyadh_avg_temp), and D (global_moving_avg(10)). The data rows are numbered 1 to 14. The values in column B are 8.72, 7.98, 5.78, 8.39, 8.47, 8.36, 8.85, 9.02, 6.74, 7.99, 7.19, 8.77, and 8.61. The values in column D are 8.03, 7.877, 7.956, and 8.239. The formula bar also shows a checkmark icon and a 'fx' icon.

	A	B	C	D
1	year	global_avg_temp	Riyadh_avg_temp	global_moving_avg(10)
2	1750	8.72		
3	1751	7.98		
4	1752	5.78		
5	1753	8.39		
6	1754	8.47		
7	1755	8.36		
8	1756	8.85		
9	1757	9.02		
10	1758	6.74		
11	1759	7.99		8.03
12	1760	7.19		7.877
13	1761	8.77		7.956
14	1762	8.61		8.239



Make Observations:

- Riyadh has always had a higher average temperature than the global average. Riyadh average temperature is hotter than the global average by 16.85°C
- Starting from 1855, Riyadh temperature profile has been incrementally increasing following the world average temperature pattern
- Starting from the 1900, the global average temperature is getting higher with time
- In 2013, Riyadh reached a record high in its average temperature of 27.78°C