

Sep 19 2017

## Weather Trends by Vandana Kuppuswamy

### STEP 1

Used the set of SQL queries to examine the sample data and extract relevant data from City\_data databale and exported to citydata.csv

```
select * from city_data limit 10 ;
select * from city_list where country like 'U%'
select * from city_list where country like 'United%'
select * from city_list where country like 'United S%' and city
like 'Los%'
Order by year
```

### STEP 2

Used SQL query to extract data from table global\_data and exported the result to globaldata.csv

```
select * from global_data order by year ;
```

### STEP 3

Opened both the csv(global\_data.csv,city\_data\_csv) in excel combined the 2 csv file into one globalcitydata.csv ,Which contained both global and city average for a given year.

Computed the moving average for 10 yrs  
Moving average was calculated using the =(average for 10 years temperature data) both for city and global temperature

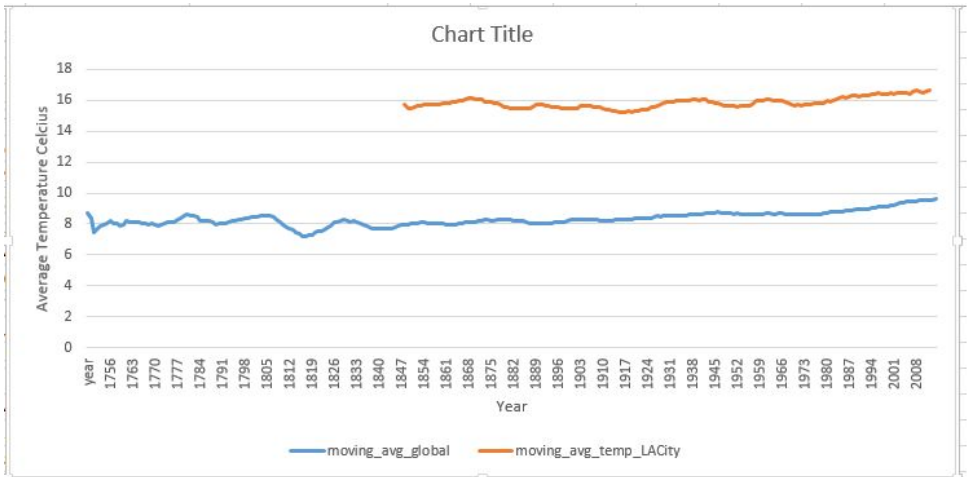
Example:

Year	GlobalTemp	Global MA	CityTemp	City MA (MA=moving average)
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1849	7.98	7.978	15.71	15.71
1850	7.9	7.988	15.28	15.495
1851	8.18	8.037	15.53	15.506 67
1852	8.1	8.045	15.61	15.532 5
1853	8.04	8.032	16.27	15.68
1854	8.21	8.088	15.74	15.69

STEP 4

Plotted the graph below



STEP 5 Data visulization key considerations:

- 1 Deciding on the kind of chart to create
- 2 what will be the x axis and y axis
- 3 what data will be compared
- 4 choosing to do the 10 year moving averages so observe the trend vs individual year data which may be more scattered.

#### **STEP6: Observation**

The average temperature in LACity has been consistently about 8 degree above global average for 150 yrs

The global temperature and local temprature have shown slight upward trend in the last 30 yrs

The average global temperature and average la temperature has been relatively constant for the previous 100 years

There has been localized dips and highs in average temperatures in particular time periods

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