What tools do you use every step of the way? (Python, SQL, Excel, etc.)

Step 1: Extract relevant data

1. Query whether my city, Suzhou, is in city_data.

Using the SQL tools provided in the workspace, the statement is as follows

```
SELECT *
FROM city_data
WHERE city='Suzhou'#Query out the existence of Suzhou data, download csv
```

2. Download global average annual data

Using the SQL tools provided in the workspace, the statement is as follows

```
SELECT *
FROM global_data# After getting global data, download the data
```

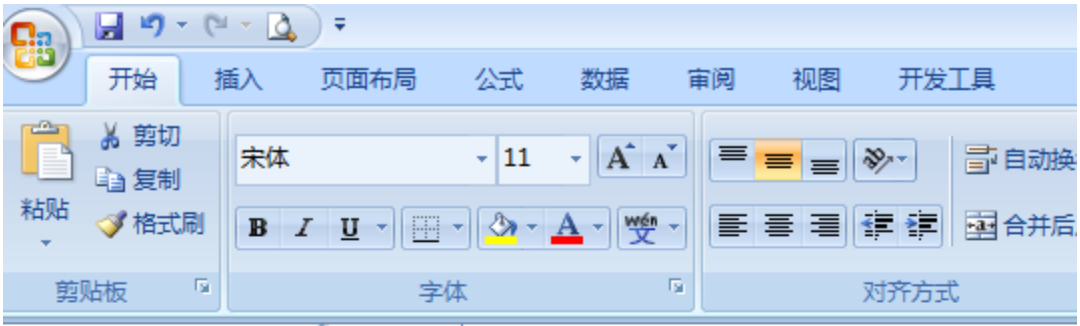
How do you calculate the moving average?

What is the key to your consideration when deciding how to visualize trends?

Step 2, create a polyline chart

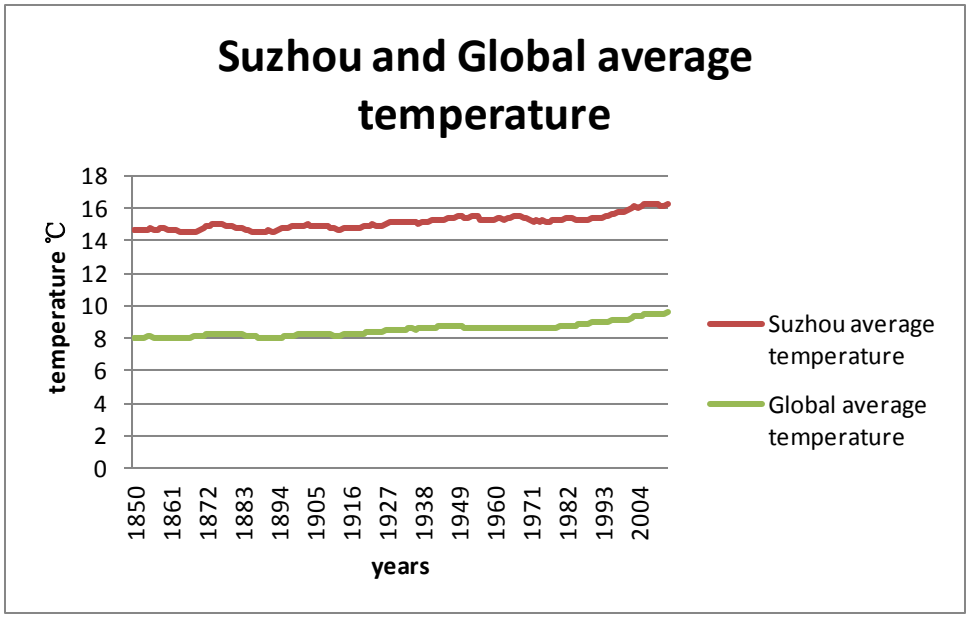
Use the MS Excel software to draw moving averages to make the lines appear relatively smooth

The insert function average calculates the average value every 10 years, for example



C11 fx 8.03

	A	B	C	D
1	year	avg_temp	global average tempreture	
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	7.88	
13	1761	8.77	7.96	
14	1762	8.61	8.24	
15	1763	7.5	8.15	
16	1764	8.4	8.14	
17	1765	8.25	8.13	
18	1766	8.41	8.09	
19	1767	8.22	8.01	
20	1768	6.78	8.01	



Q&A

What is the key to your consideration when deciding how to visualize trends?

Regarding trend visualization, the key to my consideration is to show the trend of data most intuitively while retaining the integrity of the data as much as possible. The reason I think about it is because I believe that the integrity of the data is preserved so that the results of the analysis are as close as possible. accurate.

Observation and discovery:

The commonality of temperature changes in the world and in the cities over the years

1. First of all, there have been large fluctuations in temperature changes in the world and in the cities for hundreds of years. Secondly, although the fluctuations of the changes exist, the overall annual average temperature trends of the two are rising.

2. The average annual temperature of both the world and the city has increased significantly in recent years.

Differences in average temperature changes over the years between the world and the city

1. Temperature variation range

The average temperature in Suzhou has fluctuated within the range of 14-16.5 degrees Celsius over the years. The global average temperature fluctuates within the range of 7-10 degrees Celsius. The fluctuation range of the average temperature in Suzhou is smaller than the fluctuation range of the global average temperature.

2. The average temperature in Suzhou in these years is higher than the global average temperature.

Relevant future climate trends

It is concluded that the average annual temperature in the global and Suzhou cities will be higher and higher in a certain period of time.