Explore Weather Trend

--Zihan Wei

Extract the data with SQL

▶ First, write a SQL query to extract the data from city_list

▶ Extract to csv file

SELECT *

FROM city_list

WHERE Country LIKE 'United States' AND City Like 'Houston';

▶ Second, write a SQL query to extract the weather data from city_data

▶ Extract to csv file

SELECT *

FROM city_data

WHERE Country LIKE 'United States' AND City Like 'Houston'

ORDER BY year

Extract the data with SQL

▶ Finally, write a SQL query to extract global weather data from global_data

▶ Extract to csv file

SELECT *

FROM global_data

WHERE year between 1820 and 2013

ORDER BY year

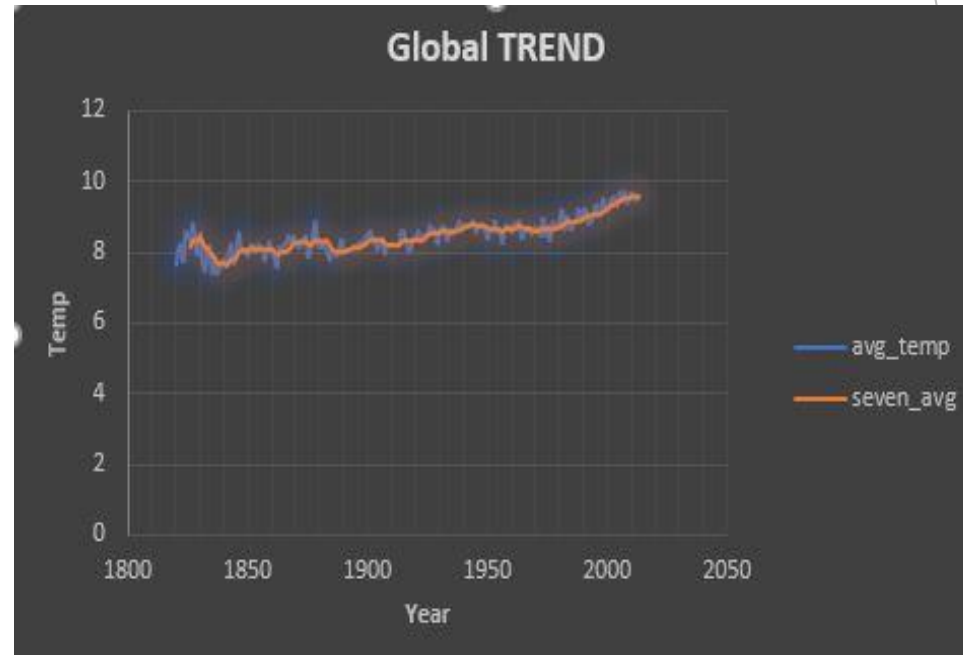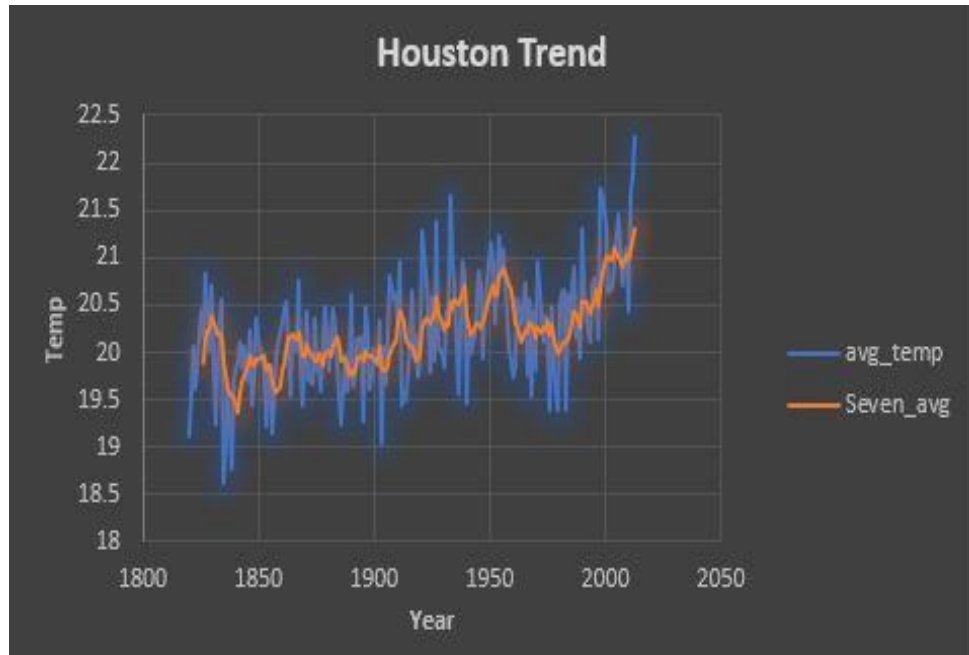▶ Because the weather data of Houston are from 1820 to 2013, the global weather data need have the same timeframe.

Calculate Moving Average with Excel

▶ Open csv files containing the Houston weather and the global data in Excel.

▶ Create a new column called seven_avg

▶ The value in the seven_avg is calculated by the formula **= AVERAGE(B2:B8)**

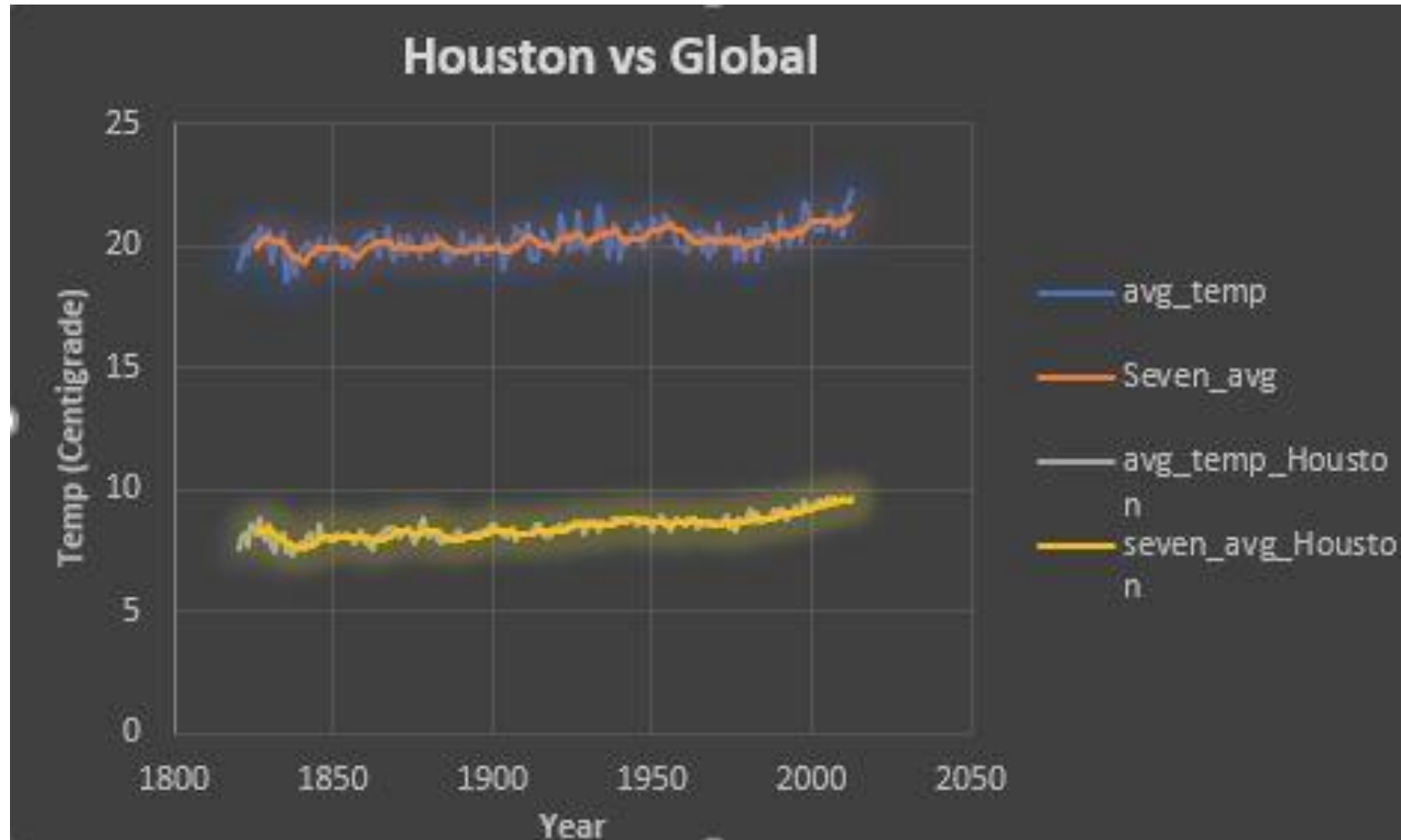▶ NOTE: the temperature data in both files is stored in B columns

Data Visualization

- Use Excel to visualize both global data and Houston data
- Two line charts are created; both are Temp vs Year

Temperature Trend Comparison

Temperature Trend Comparison

Data Observation

▶ (1) Both global and Houston temperature increased as time went on.

▶ (2) Houston is much warmer than global average temp.

▶ (3) The temperature of Houston fluctuated wildly, compared with global temperature.

▶ (4) Both trend have a big drop from around 1830 to 1850.

Thank you !