Exploring Weather Trends

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Project Work Summary

In this project, I have analyzed global temperature data and Sydney temperature data to get some similarities and differences to the overall global temperature trends.

Data Extraction

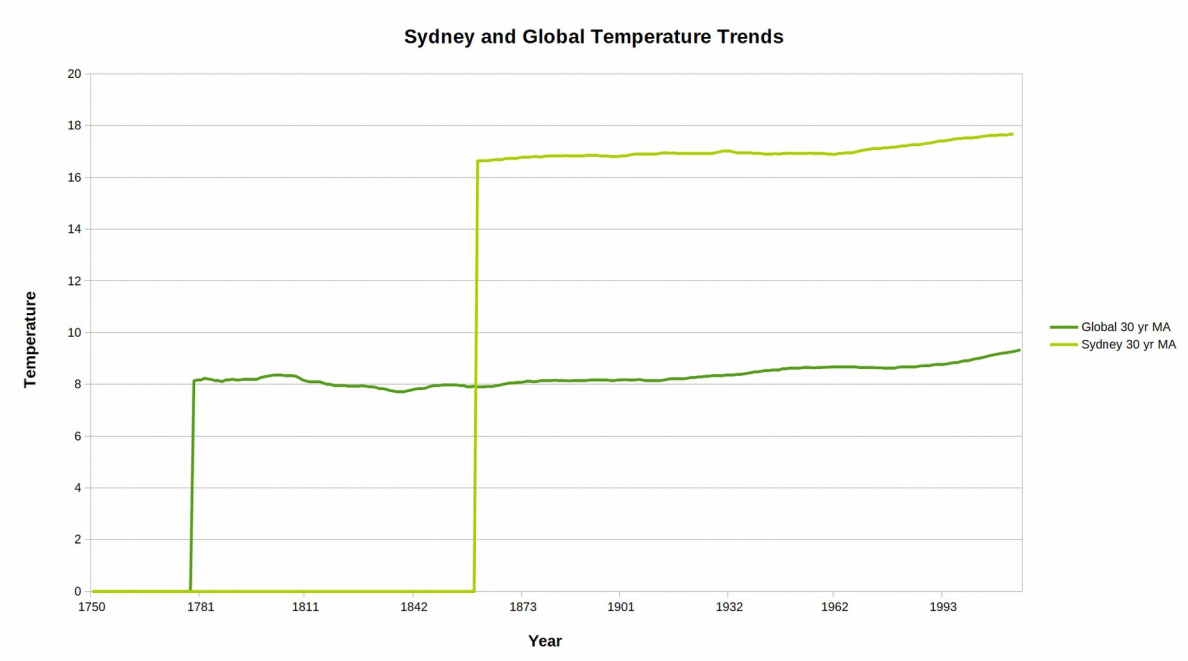
I have used SQL queries to extract global and Sydney temperature data.

1. To extract global temperature data:
```
SELECT * FROM global_data; --Export CSV
```
2. To get to know the cities in Australia:
```
SELECT * FROM city_list WHERE city_list.country = 'Australia';
```
3. To extract Sydney specific data:
```
SELECT * FROM city_data WHERE city_data.city = 'Sydney';
--Export CSV
```

CSV File Operations

I have used Libre Office to open the two CSV files. For the purpose of creating line charts, I have merged both the global and Sydney data. I have used the AVERAGE function to calculate moving average for 5 years, 10 years, 20 years and 30 years. I found the 30 year moving average lines to be the smoothest and has been used for the project.

Line Chart



Major Observations

1. Global temperatures and Sydney temperatures have been rising over the last 100 years.

2. Sydney temperatures have been higher(around double) the global average.

3. From the 1990s, global temperature is rising higher than Sydney temperature.

4. Global warming is clearly observed in the last 30 years, with average global temperature rising by ONE degree.