



أكاديمية مسك  
MISK ACADEMY



UDACITY

# Explore Weather Trends Project

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## Overview:

We have been provided with data of global and cities temperature to analyze local and global temperature data and compare the temperature trends where you live to overall global temperature trends using tools to visualize the data.

## Goals:

1. Extract the data from the database
2. Visualize the data by line chart
3. Analyze the data and find the relations and differences between global and local temperature

## Steps taken to prepare the data to be visualized in the chart:

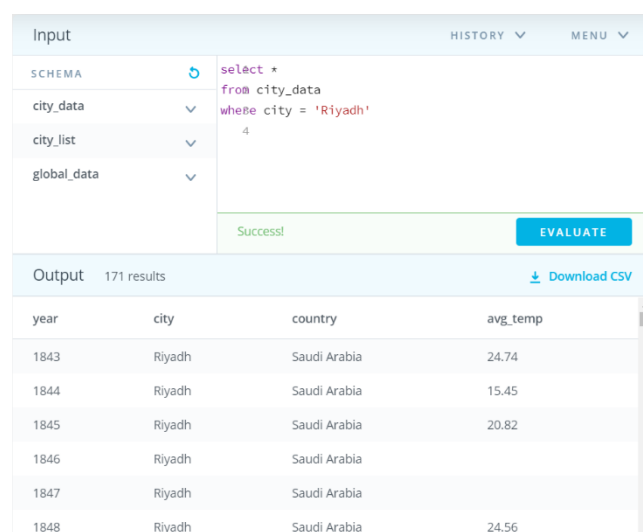
Step 1: extract the data from the data base using SQL

- The quires to extract the local data

```
SELECT *
```

```
FROM city_data
```

```
WHERE city = 'Riyadh' AND country='Saudi Arabia'
```





The screenshot shows a SQL query interface. On the left, a schema explorer lists 'city\_data', 'city\_list', and 'global\_data'. The main area contains the SQL query: `select * from city_data where city = 'Riyadh'`. Below the query, a green 'Success!' message and an 'EVALUATE' button are visible. The 'Output' section shows 171 results with a 'Download CSV' link. The table has four columns: 'year', 'city', 'country', and 'avg\_temp'. The first six rows of data are displayed.

year	city	country	avg_temp
1843	Riyadh	Saudi Arabia	24.74
1844	Riyadh	Saudi Arabia	15.45
1845	Riyadh	Saudi Arabia	20.82
1846	Riyadh	Saudi Arabia	
1847	Riyadh	Saudi Arabia	
1848	Riyadh	Saudi Arabia	24.56

- The quires to extract the

SELECT \*

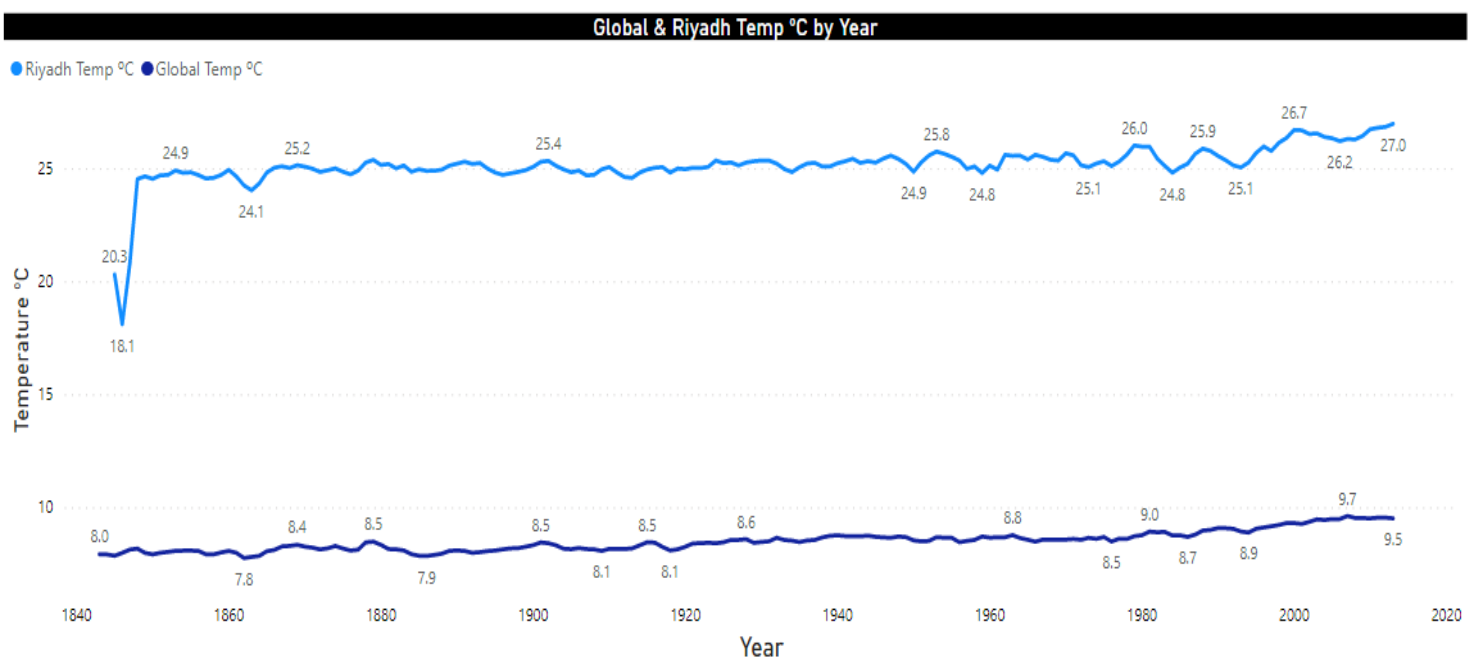
FROM global\_data

Input		HISTORY ▾	MENU ▾
SCHEMA		<pre>select * from global_data 3</pre>	
city_data	▾		
city_list	▾		
global_data	▾		
		Success!	EVALUATE
Output		266 results	 Download CSV
year	avg_temp		
1750	8.72		
1751	7.98		
1752	5.78		
1753	8.39		
1754	8.47		
1755	8.36		

Step 2: check and clean the data and upload moving average using Excel

- I used the tool moving average from the excel where we can find it in Data tab's > Data Analysis command button > select moving average > select the column “avg\_temp” > ok.
- I used 3 years to calculate the moving averages.

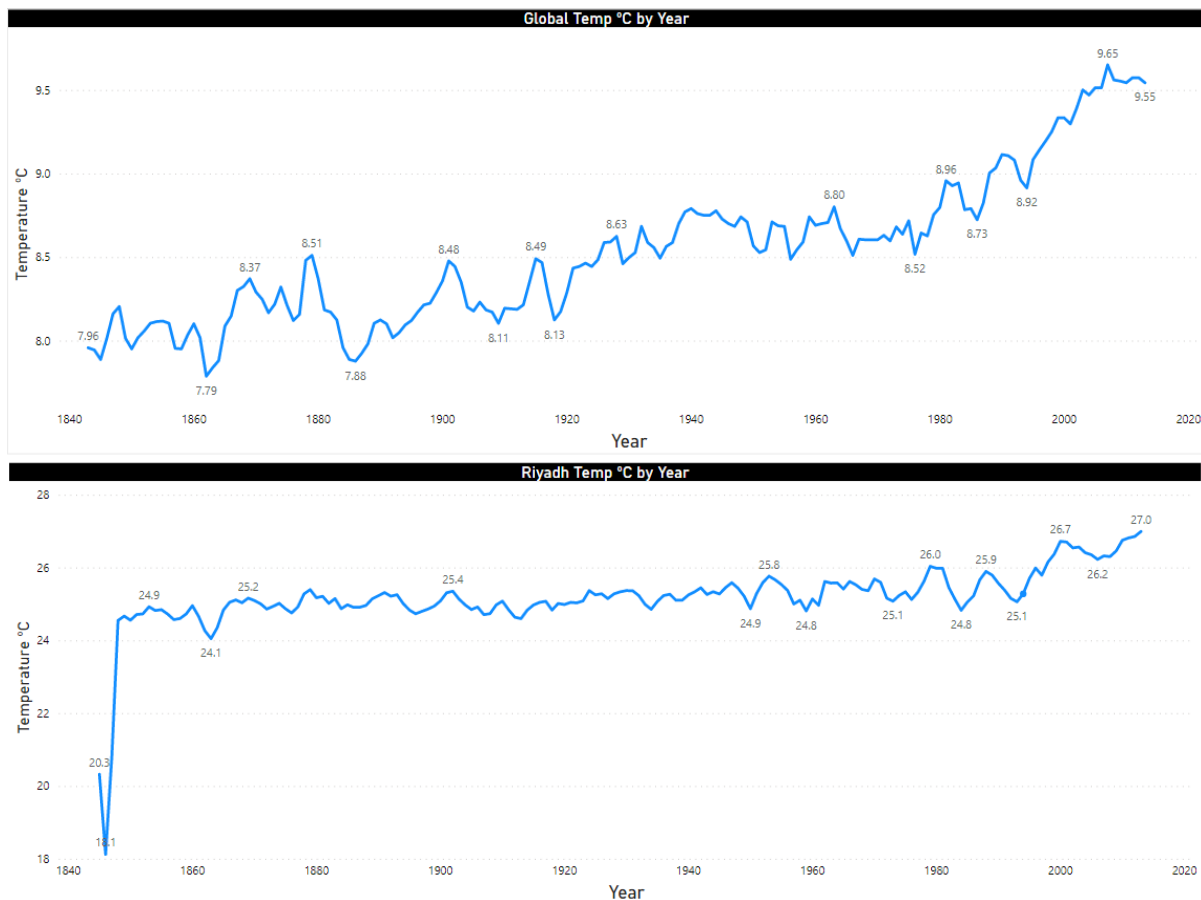
Step 3: visualize the data by line chart to find relations and differences using Power BI



## observations:

- The average of Riyadh between 18.1 and 27.0.
- The global average between 7.8 and 9.7.
- No similiters or relation interactions between Riyadh and the global.
- There is a difference about 10.3 between the global and Riyadh.
- The global temp in a steady state with little increase which means there are changes in the world that effects on the global temp as well as in Riyadh.
- In Riyadh we found that the temp in increase Specifically in between 1846 - 1849 which means it was there a strong effect that changes the temp average

## See also:



Thank You