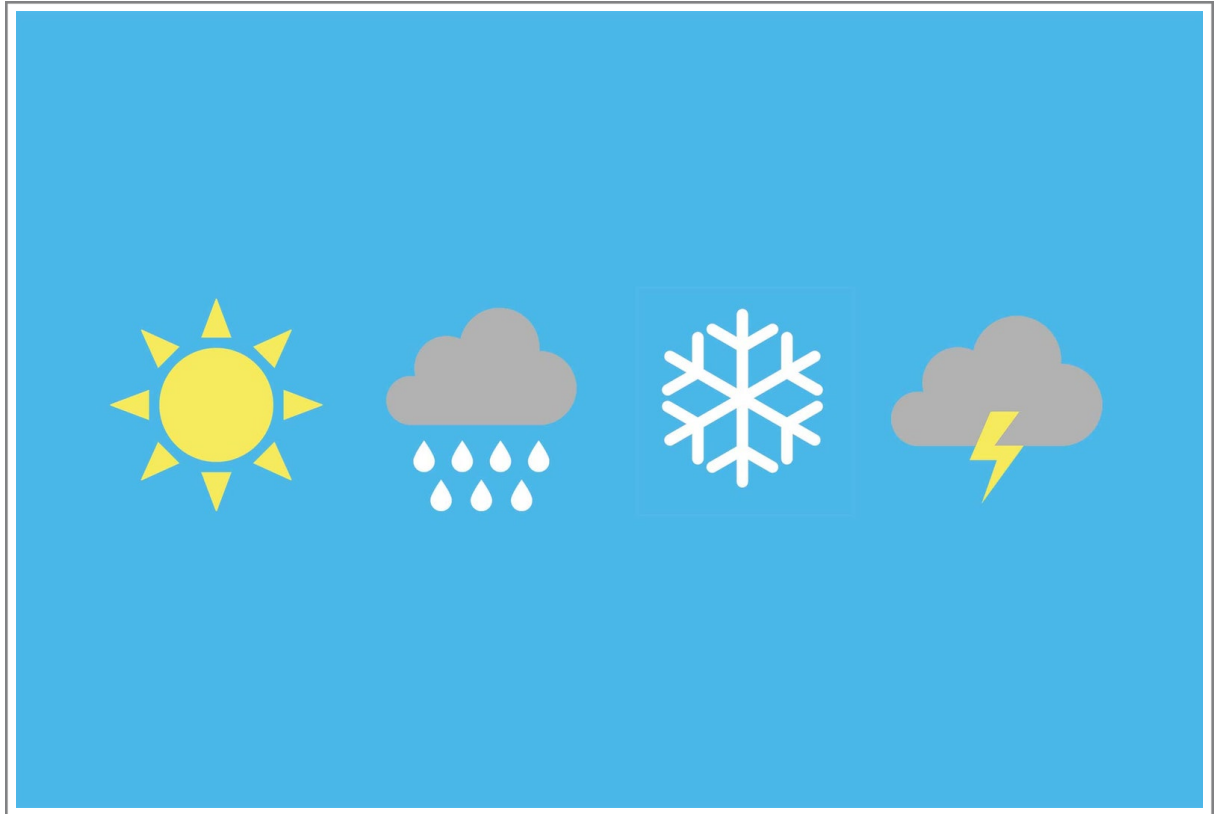


Explore Weather Trends

Data Analyst Project 1



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Jan 2022

Project Steps

Extract data from the workplace database

- Check if country Saudi Arabia exists.

```
SELECT *  
FROM city_list  
WHERE country = 'Saudi Arabia';
```

- Since both global table and city table have an average temp column, I created an alias for both columns in order to join them in one table.
- I have joined both tables and filter them based on the year and chose Riyadh as a city for city_data table

```
SELECT  
    c.year,  
    c.avg_temp as local_temp,  
    g.avg_temp as global_temp  
FROM  
    city_data as c, global_data as g  
WHERE c.year = g.year AND c.city = 'Riyadh';
```

- I ended up with 171 observations.

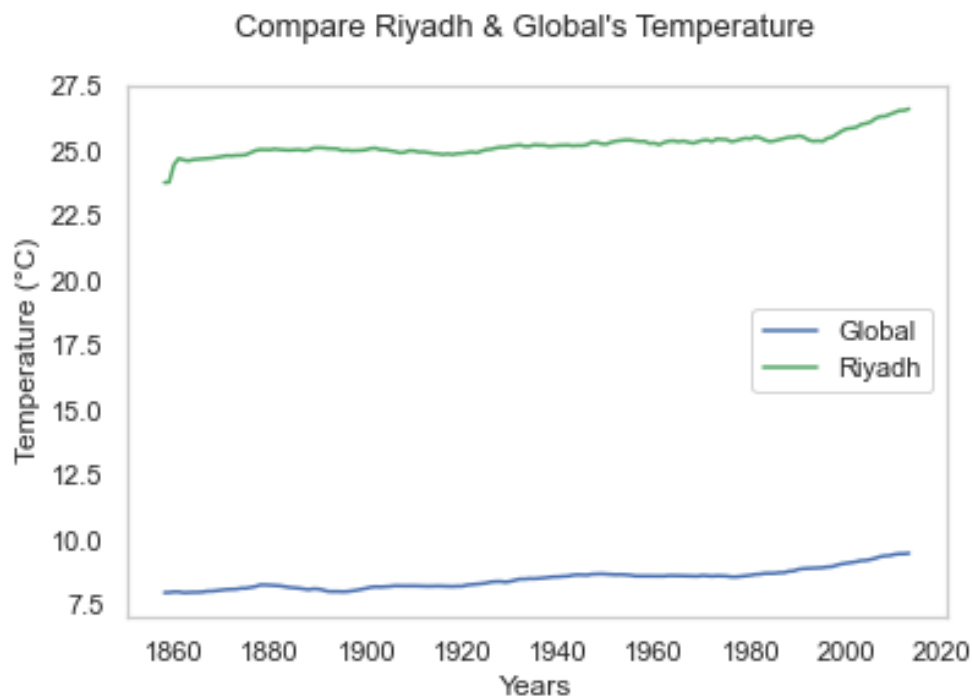
Data Manipulation and Cleaning

- 171 data are retrieved where year in both tables are identical
- The data handled is between the 1834 and 2013
- Missing data is handled by dropping the nulls
- To smooth the data for better understanding the trends I have used Moving Average of 14 by using pandas Rolling function.

Calculating the Moving Average

```
: df['global_temp'] =df['global_temp'].rolling(14).mean()  
df['local_temp'] =df['local_temp'].rolling(14).mean() #u
```

Result Chart



Observations

1. Riyadh city has a very difference temperatures comparing to the global temperature.
2. Riyadh City is more likely to have a hotter temperature comparing to the global temperature.
3. The average degree for Riyadh temperature is between 20 C to 28 C or more.
4. The average degree for the Global temperature is between 8 C to 10 C.