

project Overview

In this project, I will analyze local and global temperature data and compare the temperature trends where llive to overall global temperature trends

Extract data from database using SQL Query

SELECT year,avg_temp FROM global_data;

SEIECt year,avg_temp FROM city_data;

Calculate "Moving Average" by using (=)function in excel

Import the python library needed

```
In [1]: import pandas as pd
import matplotlib.pyplot as plt
```

read CSV file from extracted database

```
In [2]: city_temp = pd.read_csv("Explore Weather Trends.csv")
```

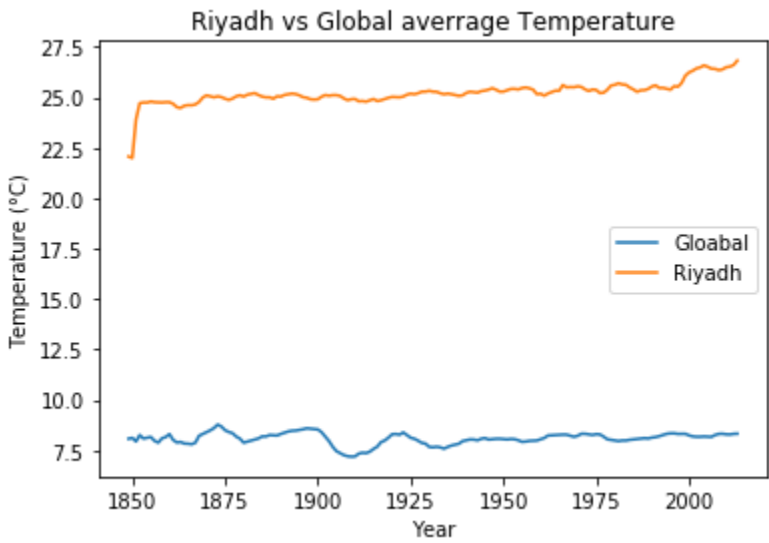
```
In [3]: city_temp.head()
```

Out[3]:

	year	avg_temp	move_average	year1	city	country	avg_temp1	move_average1
0	1750	8.72	NaN	1843.0	Riyadh	Saudi Arabia	24.74	NaN
1	1751	7.98	NaN	1844.0	Riyadh	Saudi Arabia	15.45	NaN
2	1752	5.78	NaN	1845.0	Riyadh	Saudi Arabia	20.82	NaN
3	1753	8.39	NaN	1846.0	Riyadh	Saudi Arabia	NaN	NaN
4	1754	8.47	NaN	1847.0	Riyadh	Saudi Arabia	NaN	NaN

Visualizing the Data using matplotlib Library

```
In [4]: plt.title("Riyadh vs Global avverage Temperature")
plt.plot(city_temp['year1'],city_temp['move_average'])
plt.plot(city_temp['year1'],city_temp['move_average1'])
plt.legend(['Gloabal', 'Riyadh'])
plt.xlabel("Year")
plt.ylabel("Temperature (°C)")
plt.show()
```



Noticing Riyadh City is hotter than Globa

```
In [5]: local_avg_mean = city_temp['avg_temp1'].mean()
global_avg_mean = city_temp['avg_temp'].mean()
remain_mavg = local_avg_mean - global_avg_mean
print("Mean Local Average: ", local_avg_mean)
print("Mean Global Average: ", global_avg_mean)
print("The Temperature of Riyadh City is hotter ", remain_mavg, "(°C) than Global")
```

Mean Local Average: 25.2141420118343
Mean Global Average: 8.36947368421053
The Temperature of Riyadh City is hotter 16.844668327623772 (°C) than Global

Observation

Riyadh is hotter than global average, 16.8 degrees celcius higher than global

Since 1850's the temperature is raising

The climate change between Riyadh and Global slightly small and both increasing

Riyadh gets hotter over time there are not many rains

Conclusion

The Global temperature is raising over the years which support the case of climate change in the world

```
In [ ]:
```