UDACITY

Project -1: Exploring Weather Trends

DATA ANALYST NANODEGREE

Nada A. Alzahrani

29 September 2020

Riyadh, Saudi Arabia

Contents

1 An outline

1.1 Tools:

I used SQL Query to extracting the data then download data as .CSV file. After that used anaconda (Jupyter) to analyzed the data. I used LaTeX (overleaf) to document the report.

1.2 Extract the data:

- Check which cities are in database.

```
SELECT * FROM city_list
```

- Selected all data from city_data for Riyadh city.

```
SELECT * FROM city_data
```

```
WHERE city= 'Riyadh'
```

- Selected all data about global.

```
SELECT * FROM global_data
```

1.3 Moving Average:

Calculated the moving average for 12-years. to calculate moving average in python I used rolling() and mean() functions Figure 1 and Figure 2 shown the python code. [1]

```
Global_mvavg = Global_temp['avg_temp'].rolling(window=12).mean()
```

Figure 1: Global MA

```
Local_mvavg = Local_temp['avg_temp'].rolling(window=12).mean()
```

Figure 2: Riyadh MA

1.4 Key Considerations:

- X-axis: Tears
- Y-axis: Temperature
- Pink color represent Riyadh
- Skyblue color represent Global

2 Line Chart

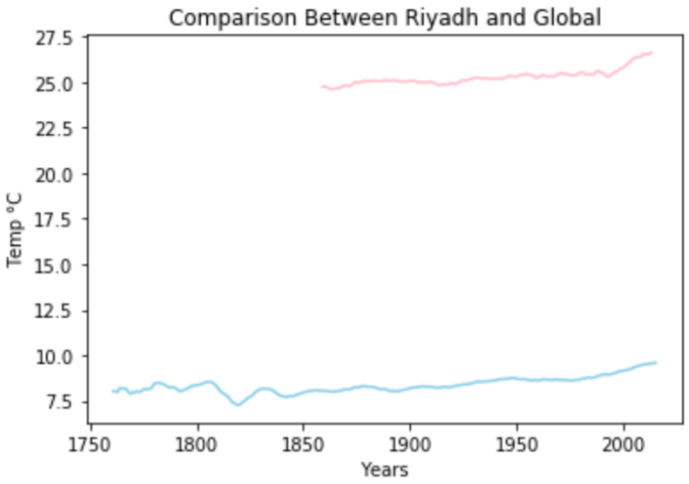

Figure 3: Comparison Between Riyadh and Global

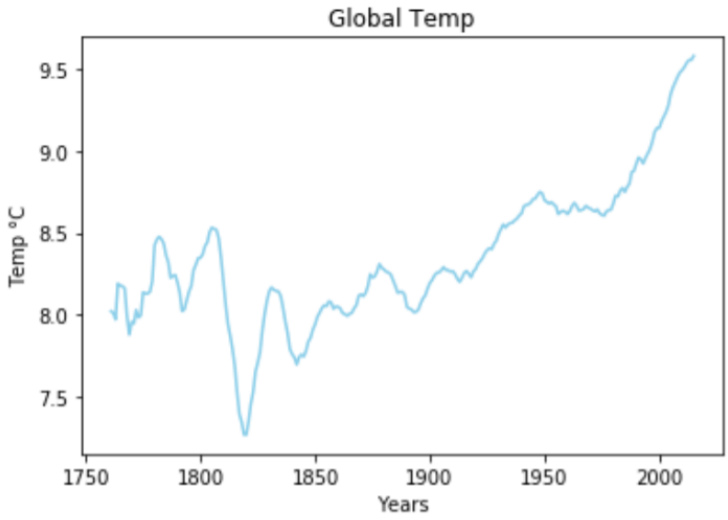

Figure 4: Global Temperature

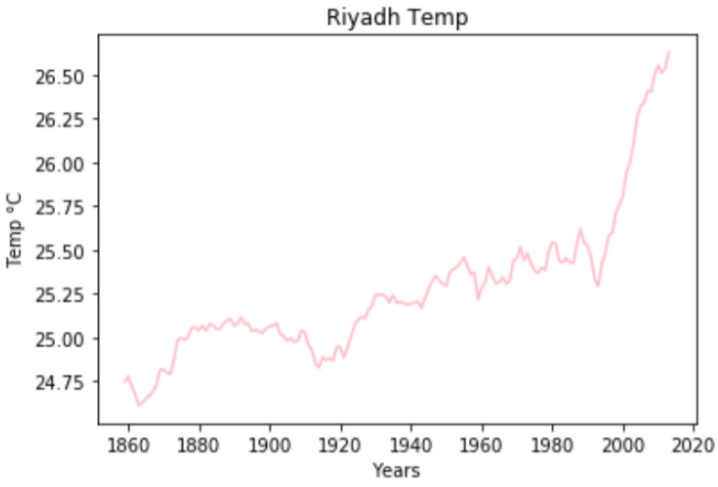

Figure 5: Riyadh Temperature

3 Observations

- The temperatures are shown in the chart at every 50 years interval.
- The global temperature for 12-years has been between 7.0 C to 9.6 C.
- The local (Riyadh) temperature for 12-years has been between 24.9 C to 27.4 C.
- In 1975, the global temperature began to rise incessantly.
- In 1992, the temperature in Riyadh began to rise incessantly.
- In conclusion, Riyadh temperature hotter than the global temperature.

References

[1] "Moving averages." https://www.datacamp.com/community/tutorials/moving-averages-in-pandas/. (Accessed on 27/09/2020).

[2] "Line chart." https://pythonbasics.org/matplotlib-line-chart/. (Accessed on 27/09/2020).