Explore Weather Trends

Udacity Data Analyst Nanodegree

Project 1

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What tools did you use for each step?

ans:

```
SELECT city_data.city AS "City Name",
 city_data.year AS "Year",
 city_data.avg_temp AS "City Average Temp.",
global_data.avg_temp AS "Global Average Temp."
FROM city_data JOIN global_data ON city_data.year = global_data.year
WHERE city_data.city='Cairo' AND city_data.country='Egypt'
```

And used python packages to calculate moving average and make line chart

How did you calculate the moving average?

ans: I used python packages I learned before to calculate the range moving average.

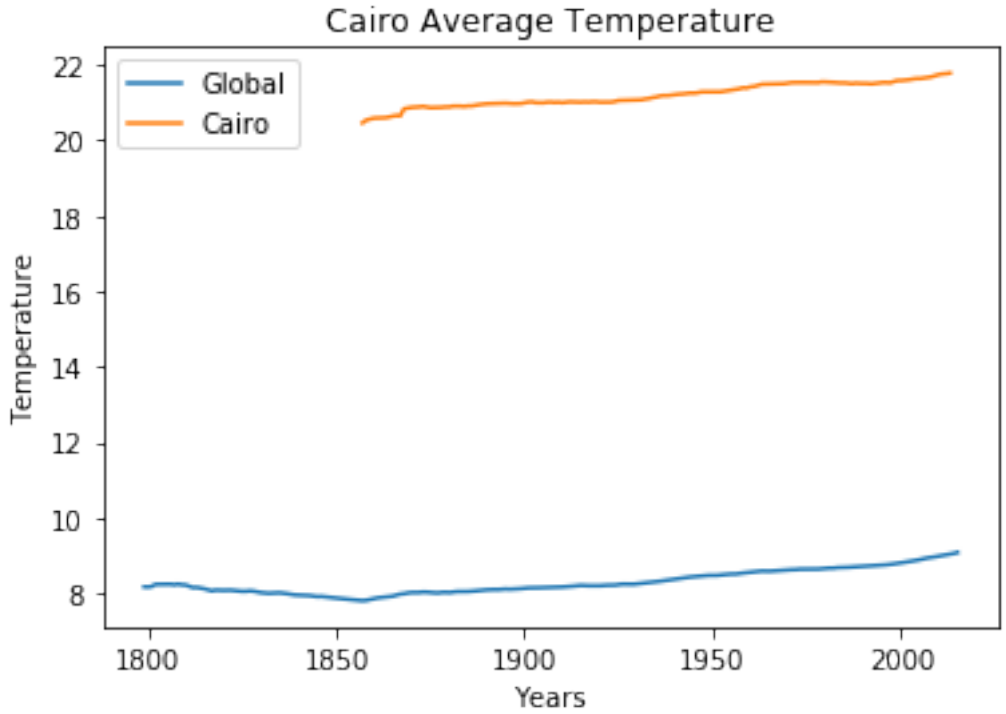
```
In [2]: import pandas as pd
        import matplotlib.pyplot as plt
        import numpy as np

In [3]: global_temp = pd.read_csv('global.csv') # importing 'global tempreature data'
        city_temp = pd.read_csv('city.csv')

In [6]: glb_mv_avg = global_temp['avg_temp'].rolling(50).mean()
        local_mv_avg = city_temp['avg_temp'].rolling(50).mean()
```

What were your key considerations when deciding how to visualize the trends?

Ans: My key consideration was to observe the change in moving average range.



Observations:

Similarities:

1- Both the global and local shows a continuous increase in the temperature.
2- Both Cairo and the Globe show high decrease in temperature between 1800 and 1850.

Differences:

1- Local temperature is increasing faster than the global temperature.
2- After 2000 the difference grow more rabidly between the local and the globe.