Exploring Weather Trends

June 18, 2020

1 Exploring Weather Trends

1.1 Summary

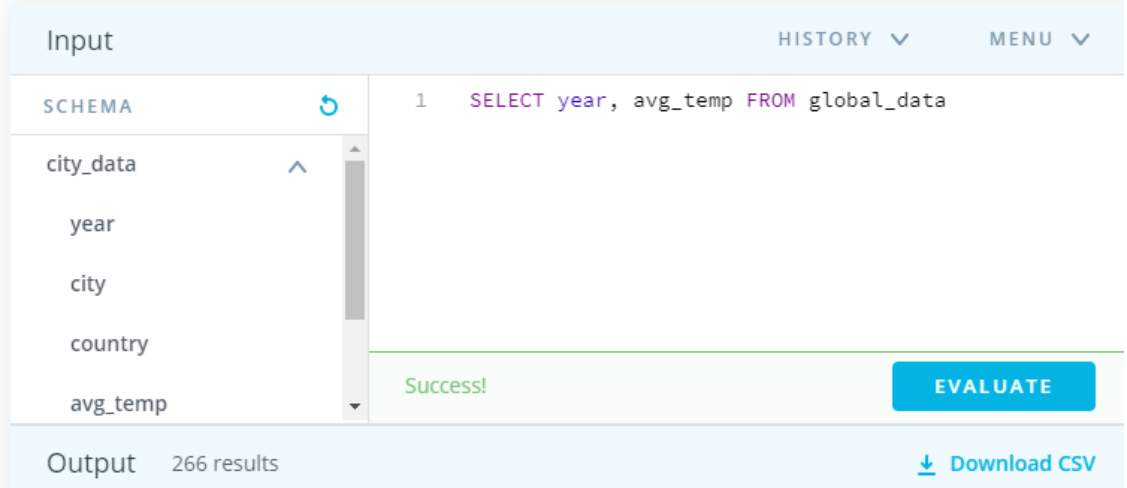
In this project, you will analyze local and global temperature data and compare the temperature trends where you live to overall global temperature trends.

[1]:
```
import numpy as np
import matplotlib.pyplot as plt
import pandas as pd
%matplotlib inline
```

1.2 Importing the data

For city data write and evaluate the follwing SQL code.

For global data write and evaluate the follwing SQL code.



1.3 Loading the Data

[2]:
```
dfg=pd.read_csv("global.csv")
dfn=pd.read_csv("newyork.csv")
dfm=pd.read_csv("multan.csv")
print(len(dfg))
print(len(dfn))
print(len(dfm))
```

```
266
271
198
```

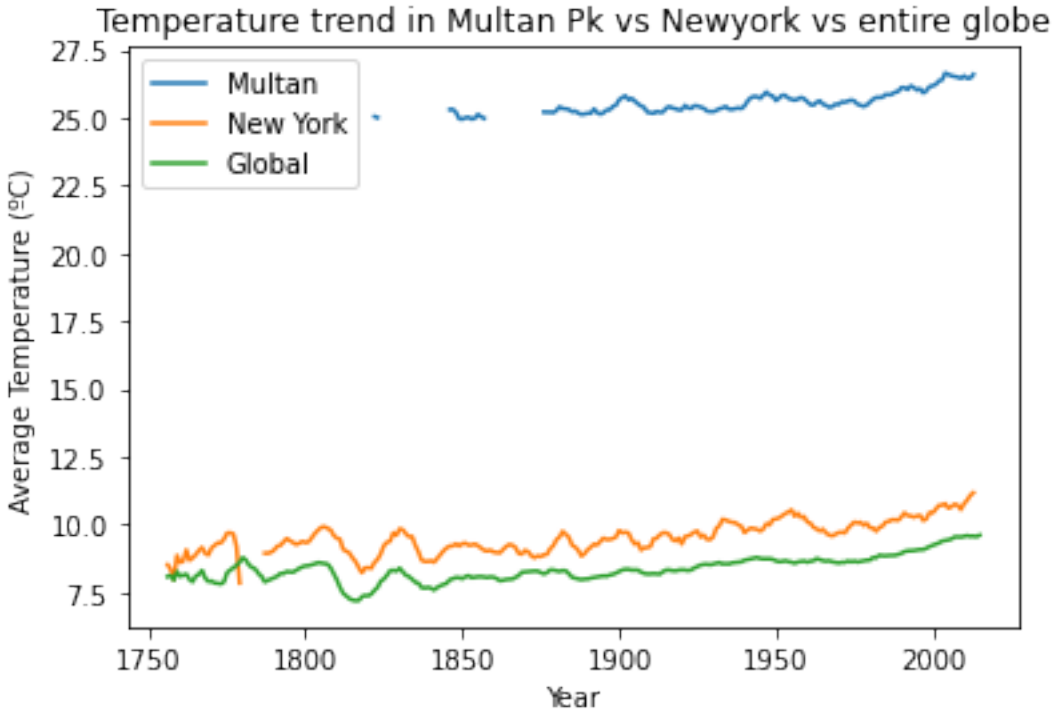
1.4 Preprocessing

[3]:
```
dfg["mpa"]=dfg["avg_temp"].rolling(window=7).mean()
dfn["mpa"]=dfn["avg_temp"].rolling(window=7).mean()
dfm["mpa"]=dfm["avg_temp"].rolling(window=7).mean()
```

1.5 Visualization

[4]:
```
x2 = dfm["year"]
y2 = dfm["mpa"]
plt.plot(x2, y2, label = "Multan")
x3 = dfn["year"]
y3 = dfn["mpa"]
plt.plot(x3, y3, label = "New York")
plt.xlabel('Year')
x1 = dfg["year"]
y1 = dfg["mpa"]
plt.plot(x1, y1, label = "Global")
plt.ylabel('Average Temperature (ºC)')
```

```
plt.title('Temperature trend in Multan Pk vs Newyork vs entire globe')
plt.legend()
plt.show()
```



1.6 Observations

1. Multan is one of the hotest city in the world becasue it is present on the equator.
2. Multan is much much hotter than Newyork and Globe.
3. Moving Point Averge temperature of the Multan is smoother then Newyork.
4. With the increase in global warming, temperature of Mutan is also increasing.