

Project 1: Data Analyst

Exploring Weather Trends:

GitHub Link: <https://github.com/igooku/Data-Analyst-ND/tree/main>

Outline:

Exploring weather trends is the first project of Data Analyst Nanodegree where our goal is to analyze local and global temperature and compare it with my native city which is Dublin.

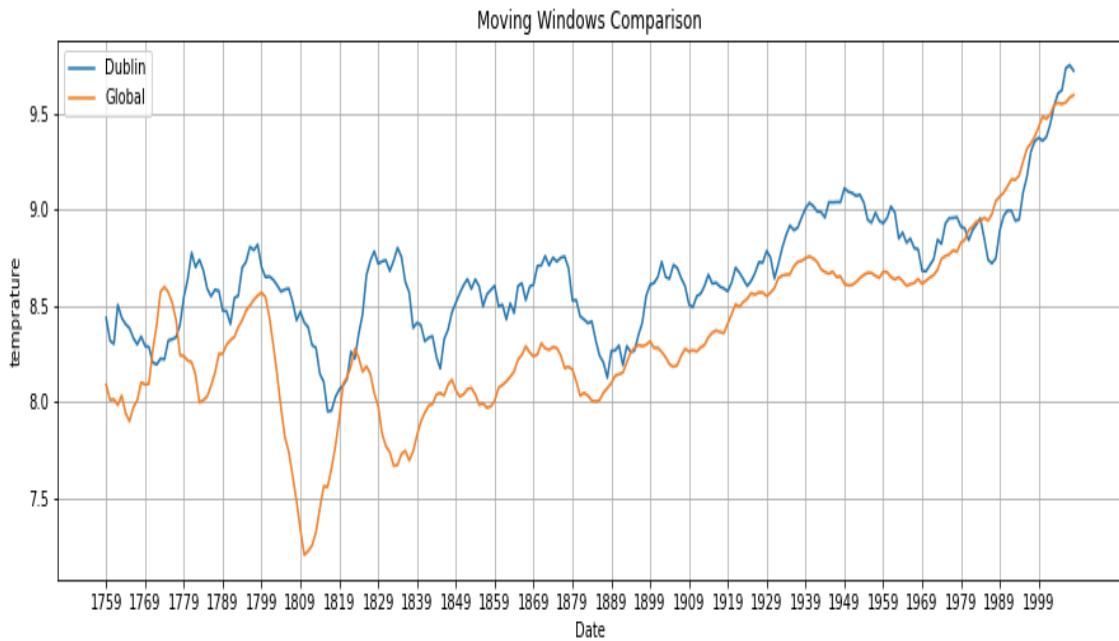
First step in this process is to extract data with the help of sql. Udacity provide the environment where with just simple SQL query we can get the data. Our database consists of three table city_list, city_data and global_data. I just download the data of Dublin city and global temptature with the help of SQL queries.

Second step is to know your data well. For this purpose, I use spreadsheets which is most powerful tool in Data Analyst toolbox. Spreadsheets gives the overview of data or the big picture of data. By putting data in google sheets I just combine the two data tables city_data and global_data. Which gives me ease in next process which is analyzing the data.

Third step is analyzing the data with python and jupyter notebook. By combining two spreadsheets our data is ready for next phase which is analyzing. Python is the powerful language for analyzing the data. I used pandas, matplotlib and numpy libraries for my analyzing process. Rolling windows is a pandas function which I used for this purpose.

Last step is presenting our finding in form of desired visual. Line graph is best visual representation for comparing time series data and also Udacity required line graph for this project. I used matplotlib for creating line graph.

Observation:



- As we can see from graph, Overall Dublin is hotter than global temperature with just two times 1769 and 1980 respectively global temperature beat Dublin.
- Global temperature is lowest 1809 where Dublin where Dublin temperature ia at lowest on 1818.
- On the other hand, Both global and local at their peak temperature in 1999 with the average of around 9.6 and 9.9 for global and local respectively. This also shows upward trend for temperature rising globally at dangerously high speed.
- Based on Line Chart result it is obvious that world temperature is rising with the alarming speed which second all the environmental scientist concern about world. All global should sit together and start working on steps which help reduce world temperature next fifty year so we left good place for our kids to live.