



DATA ANALYST NANODEGREE

PROJECT TOPIC:

EXPLORE DATA TRENDS

BY

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Data Extraction procedure:

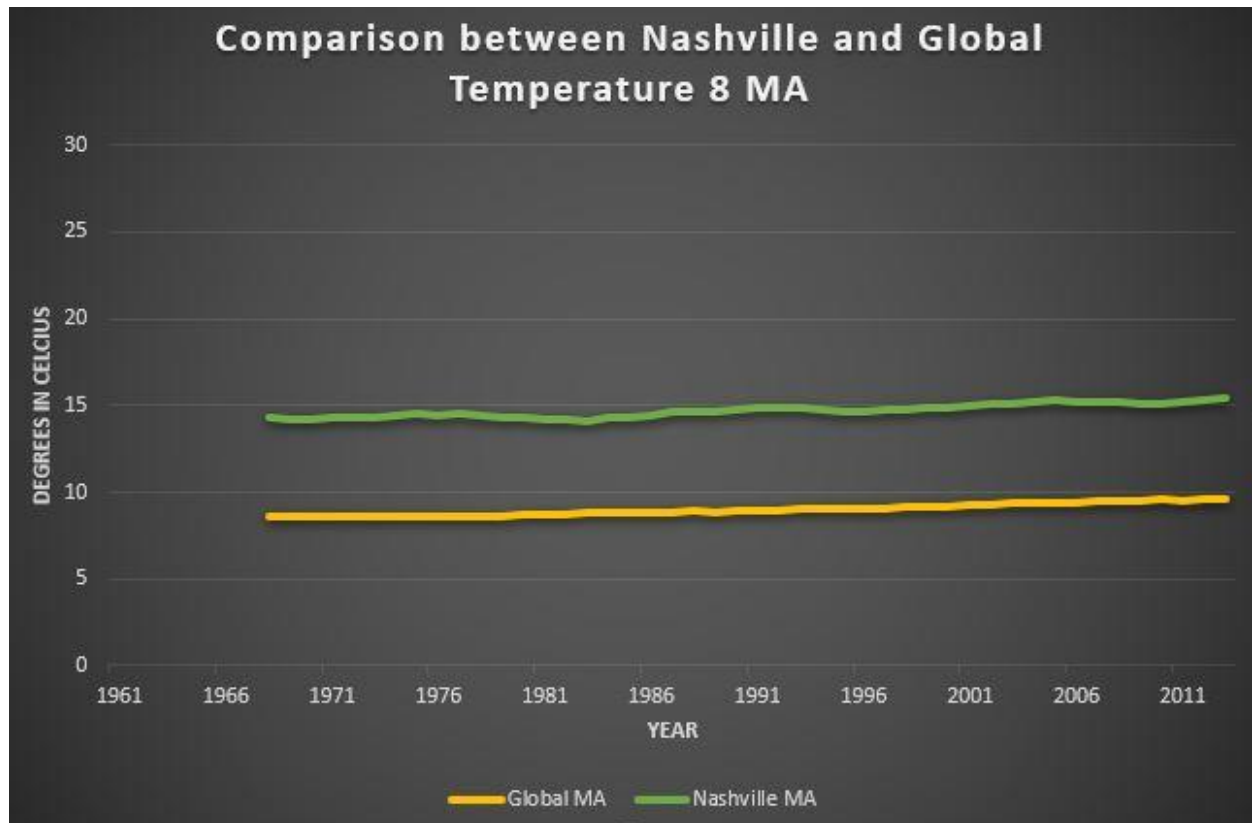
Objectives	SQL statement
1. A SQL statement to view the list of cities in your country.	Select city from city_list where country = 'United States';
2. A SQL statement to specifically view your city.	Select city, country from city_list where city = 'Nashville' and country = 'United States';
3. A SQL statement to get data for the avg_temp in your city with limit.	Select year, avg_temp from city_data where year > 1750 and year < 2014 and city = 'Nashville';
4. A SQL statement to get the global avg_temp.	Select year, avg_temp from global_data where year > 1750 and year < 2014;

DATA MANIPULATION

- ❖ The data was downloaded in CSV results using the workspace tool.
- ❖ The data required were copied (year, city avg_temp and global avg_temp) to a new excel spreadsheet.
- ❖ 8 year moving averages was calculated for city avg_temp and global avg_temp using the excel formula below for easy observations:

City 8-year MA	Global 8-year MA
=AVERAGE (C2:C9)	=AVERAGE (E2:E9)

Line chart for Nashville and Global temperature



OBSERVATIONS:

- ❖ The Global average temperature varies from 8.35 to 9.61 while Nashville average temperature varies from 13.55 to 16.2.
- ❖ Nashville city temperature is **Hotter** if compared with global temperature.
- ❖ Change in temperature over time:

Year	Change in Global temperature	Change in city temperature	Observations
1968 - 1973	8.64 - 8.64	14.30 - 14.30	Steady
1977 - 1983	8.64 - 8.80	14.51 - 14.11	Increasing/Decreasing
1993 - 2013	9.00 - 9.56	14.87 - 15.47	Increasing

- ❖ From the graph and the above table, it can be inferred that the temperature was steady for both Nashville and Global in the early years.
- ❖ From 1977 - 1983, there was increase in global temperature while Nashville temperature decreases.
- ❖ From 1993 – 2013, both global and city temperature increased significantly. The increase Global temperature is directly proportional to the increase in Nashville temperature.

CONCLUSIONS:

It can be inferred from the graph that the temperatures of both global and the city has been increasing steadily over time. Therefore, since both temperatures tends to increase over time, it can be concluded that the world is getting **Hotter**.