Data Analysis Nanodegree Program Udacity

Project I : Explore Weather Trends

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Indonesia

I.   Introduction

This project is part of Data Analysis Nanodegree Program from Udacity. From this project, we try to analyze the weather trends in the major city closest to where we live. And then we try to make observation what happen with those two datasets.

The tools that we use in this project mentioned below :

- Microsoft Excel
- SQL

The steps we take in this project mentioned below :

- Extract two data dataset from SQL Workspace which is provided by Udacity

    global_data.csv

    ```sql
    SELECT *
    FROM global_data
    ```
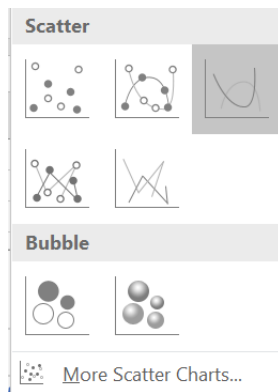
    city_data.csv

    ```sql
    SELECT year, avg_temp
    FROM city_data
    WHERE city = 'Medan' AND country = 'Indonesia'
    ```

- Calculate moving average using function 'AVERAGE' in Microsoft Excel within 10 year
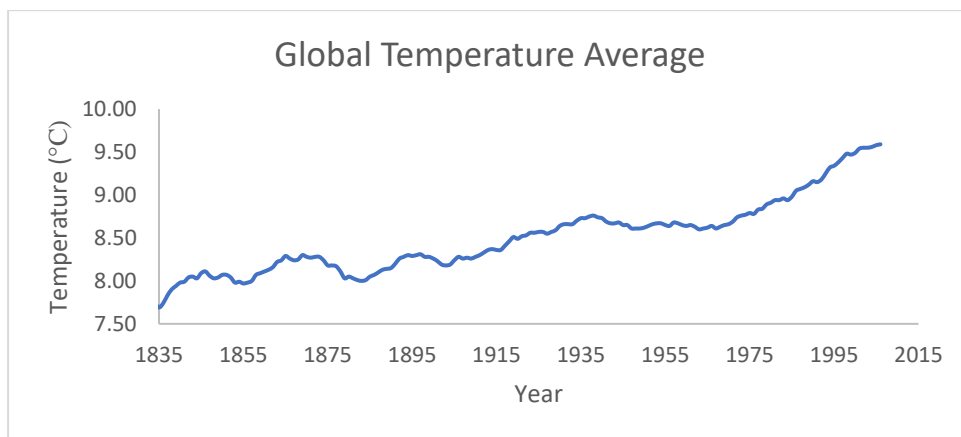
- Plot the chart using *scatter with smooth lines* in Microsoft Excel
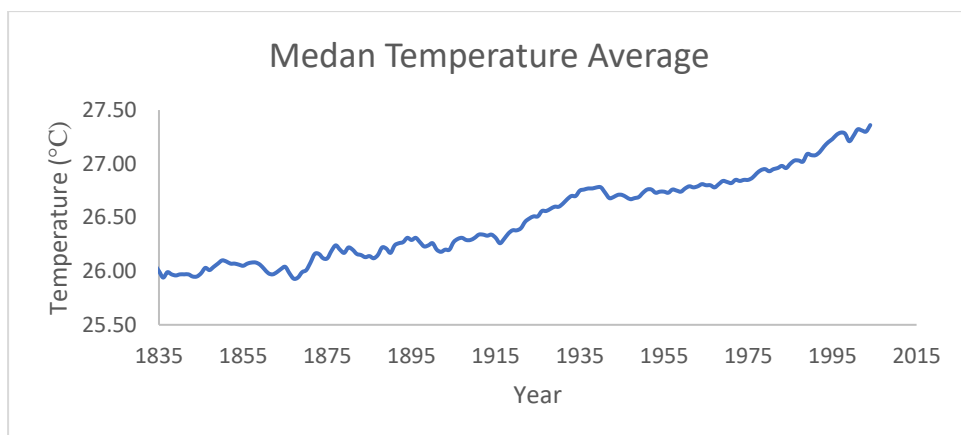

II. Explanation

Global Temperature Average

Medan Temperature Average

- As we can see here, we know that Medan is hotter than the Global temperature since Indonesia lies on the equator which makes exposure to the sunlight longer than the rest of the world.
- From 1955, Medan city is in the constant rise of temperature.
- From 1975, Global Temperature is in the constant rise of temperature following the steps of Medan city in 1955.
- In Global Temperature Chart, As we can see here from 1835 to 2015, the difference between the average temperature is approximately 2 degrees Celcius
- In Medan Temperature Chart, from 1835 to 2015, the difference between the average temperature is more than 1 degrees Celcius.
- According to the chart, Both in Medan and the world. The temperature keeps rising and rising which makes it the world is getting hotter over time.

III.   Conclusion

We can now see that the world is getting hotter and the temperature would keep rising over time unless we act to combat the climate changes and keep the earth livable and sustainable for living things who lives in it.