Exploring weather trends

Udacity Data analysis

Project one

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Introduction:

I used SQL query to take some data that contain yearly average temperature of city 'Riyadh' and the global temperature.

And then analyzed these data which these analyzed data shown some information in chart for more clarity.

Steps taken to prepare the data to be shown or visualized:

The first step is writing the SQL query to extract the data from the database that related to the temperature information or data.

SQL queries I have used to extract Riyadh temperature:

```
Select year,avg_temp
From city_data
Where city = 'riyadh' and year > 1950
```

SQL queries I have used to extract global temperature:

```
select year ,avg_temp
```

from global_data

where year > 1950

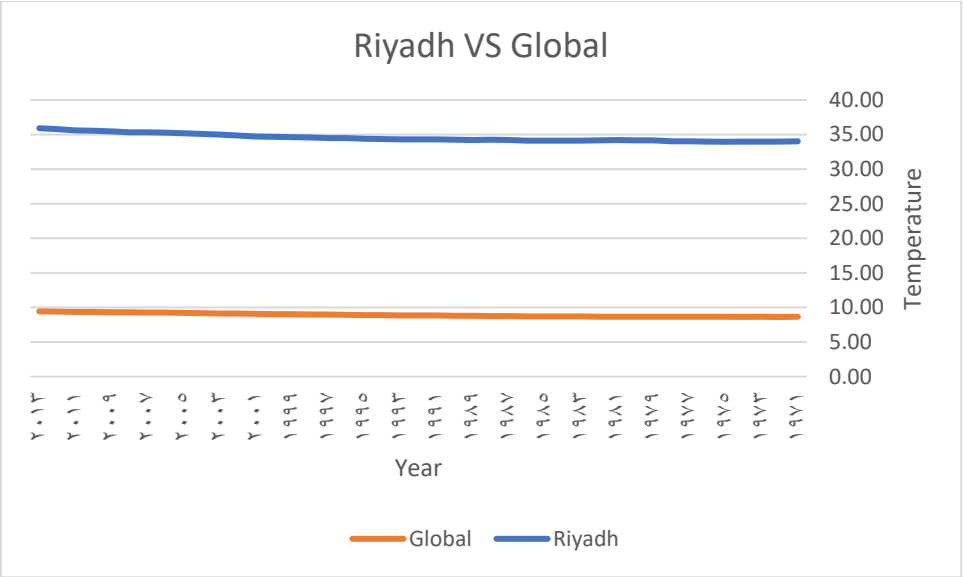
The second step is putting these data into excel to calculate the moving average of 20 years for Riyadh city temperature and Global cities temperature.

Global	Riyadh
8.64	25.40
8.64	25.35
8.64	25.36
8.64	25.34
8.64	25.32
8.64	25.32
8.65	25.39
8.65	25.40
8.65	25.51
8.67	25.51
8.69	25.56
8.68	25.48
8.69	25.45
8.70	25.44
8.71	25.43
8.72	25.39
8.73	25.46
8.77	25.50
8.78	25.45
8.81	25.44
8.84	25.47
8.86	25.45
8.85	25.44
8.88	25.48
8.91	25.51
8.95	25.57
8.96	25.55
9.01	25.59
9.03	25.62
9.04	25.66
9.06	25.69
9.10	25.78
9.13	25.87
9.16	25.93
9.21	25.98
9.25	26.02
9.28	26.03
9.30	26.04
9.32	26.12
9.35	26.21
9.37	26.26
9.40	26.36
9.44	26.50

year	Global avg_temp
1951	8.63
1952	8.64
1953	8.87
1954	8.56
1955	8.63
1956	8.28
1957	8.73
1958	8.77
1959	8.73
1960	8.58
1961	8.8
1962	8.75
1963	8.86
1964	8.41
1965	8.53
1966	8.6
1967	8.7
1968	8.52
1969	8.6
1970	8.7
1971	8.6
1972	8.5
1973	8.95
1974	8.47
1975	8.74
1976	8.35
1977	8.85
1978	8.69
1979	8.73
1980	8.98
1981	9.17
1982	8.64
1983	9.03
1984	8.69
1985	8.66
1986	8.83
1987	8.99
1988	9.2
1989	8.92
1990	9.23
1991	9.18
1992	8.84
1993	8.87
1994	9.04
1995	9.35
1996	9.04
1997	9.2
1998	9.52
1999	9.29
2000	9.2
2001	9.41
2002	9.57
2003	9.53
2004	9.32
2005	9.7
2006	9.53
2007	9.73
2008	9.43
2009	9.51
2010	9.7
2011	9.52
2012	9.51
2013	9.61

year	Riyadh avg_temp
1951	26.1
1952	25.72
1953	25.51
1954	25.8
1955	25.33
1956	25.02
1957	24.69
1958	25.64
1959	24.14
1960	25.67
1961	25.12
1962	26.1
1963	25.54
1964	25.14
1965	25.59
1966	26.16
1967	24.87
1968	25.21
1969	26.05
1970	25.84
1971	24.93
1972	24.74
1973	25.6
1974	25.4
1975	25.04
1976	24.97
1977	25.99
1978	25.95
1979	26.2
1980	25.83
1981	25.95
1982	24.62
1983	24.85
1984	25.05
1985	25.3
1986	25.36
1987	26.37
1988	25.99
1989	25.05
1990	25.7
1991	25.43
1992	24.37
1993	25.42
1994	26.08
1995	25.64
1996	26.26
1997	25.49
1998	26.73
1999	26.92
2000	26.55
2001	26.67
2002	26.44
2003	26.62
2004	26.2
2005	26.27
2006	26.24
2007	26.49
2008	26.21
2009	26.71
2010	27.37
2011	26.4
2012	26.83
2013	27.78

Then I used a line chart that shown the comparison average temperature between the Riyadh city and the global cities to make it easier to observe the comparison or the difference between them.



Observations:

1-by notice the chart above it shows the temperature is raising over the time because the climate is change.

2-Riyadh has a higher average temperature compared to the global average.

3-The overall trend looks like the temperature will keep increasing and that is a dangerous sign or indicator.

4-Riyadh city is getting hotter over the time.

Conclusion:

There is an evidence suggests that global temperature is raising over the time which is indicate to the dangerous sign or indicator.