

Exploring Weather Trends – Project

Data Analyst Nanodegree first project

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This is the report for the
Exploring Weather Trends
Project in this project we will
analyze the temperature data for
the local and global temperature
and compare between them

Extract the data

To extract data from database we need to
write some SQL query

Prepare the data to be visualiz ed

To make the data ready to be visualized will
use the Microsoft Excel tool

Moving average

We will calculate the moving average for every
ten years

Extract the data from database

The SQL query that was used

First we need to see if my country in database or not we will use that SQL query

```
select country from city_list
```

Second after making sure that my county in database will need to see the list of city to chosen the local area we will use that SQL query

```
select city from city_list where country = 'Saudi Arabia'
```

Third after chosen the city will need the average temperatures for this city so we will use that SQL query

```
select * from city_data where city = 'Riyadh'
```

Fourthly will need the global average temperatures so we will use that SQL query

```
select * from global_data
```

Sixthly we will upload data to making it visualized

1) After writing the query click on  to see the results

2) To download the results click on 

Moving average

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FileHomeInsertPage LayoutFormulasDataReviewViewDeveloperHelp

CutCopyFormat PainterClipboard

Arial11A

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Font

Wrap TextMerge & Center

Alignment

General

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Number

Conditional FormattingFormat as TableCell Styles

Styles

InsertDelete Format

Cells

AutoSumFillClearSort & FilterFind & SelectAnalyze Data

Editing

ShareComments

Analysis

H7

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
1	year	city	country	avg temp	year for g	avg temp															
2	1848	Riyadh	Saudi Arab	24.56	1848	7.98															
3	1849	Riyadh	Saudi Arab	24.8	1849	7.98															
4	1850	Riyadh	Saudi Arab	24.34	1850	7.9															
5	1851	Riyadh	Saudi Arab	25.03	1851	8.18															
6	1852	Riyadh	Saudi Arab	24.85	1852	8.1															
7	1853	Riyadh	Saudi Arab	24.93	1853	8.04															
8	1854	Riyadh	Saudi Arab	24.72	1854	8.21															
9	1855	Riyadh	Saudi Arab	24.92	1855	8.11															
10	1856	Riyadh	Saudi Arab	24.57	1856	8															
11	1857	Riyadh	Saudi Arab	24.26	1857	7.76															
12	1858	Riyadh	Saudi Arab	25.01	1858	8.1															
13	1859	Riyadh	Saudi Arab	24.95	1859	8.25															
14	1860	Riyadh	Saudi Arab	24.94	1860	7.96															
15	1861	Riyadh	Saudi Arab	24.13	1861	7.85															
16	1862	Riyadh	Saudi Arab	23.77	1862	7.56															
17	1863	Riyadh	Saudi Arab	24.28	1863	8.11															
18	1864	Riyadh	Saudi Arab	25.03	1864	7.98															
19	1865	Riyadh	Saudi Arab	25.23	1865	8.18															
20	1866	Riyadh	Saudi Arab	24.92	1866	8.29															
21	1867	Riyadh	Saudi Arab	25.22	1867	8.44															
22	1868	Riyadh	Saudi Arab	25	1868	8.25															
23	1869	Riyadh	Saudi Arab	25.3	1869	8.43															
24	1870	Riyadh	Saudi Arab	25.02	1870	8.2															
25	1871	Riyadh	Saudi Arab	24.73	1871	8.12															
26	1872	Riyadh	Saudi Arab	24.87	1872	8.19															
27	1873	Riyadh	Saudi Arab	25.24	1873	8.35															
28	1874	Riyadh	Saudi Arab	24.98	1874	8.43															
29	1875	Riyadh	Saudi Arab	24.43	1875	7.86															
30	1876	Riyadh	Saudi Arab	24.89	1876	8.08															

results_7results_8Sheet1

Second now we can calculate the moving average for each 10 years

- Data -> data analysis -> moving average

Moving Average

Input
Input Range:

☐ Labels in First Row

Interval:

Output options
Output Range:

New Worksheet Ply:

New Workbook

☐ Chart Output ☐ Standard Errors

OK Cancel Help

Moving Average

Input
Input Range:

☐ Labels in First Row

Interval:

Output options
Output Range:

New Worksheet Ply:

New Workbook

☐ Chart Output ☐ Standard Errors

OK Cancel Help

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Get Data From Text/CSV Recent Sources From Web Existing Connections Refresh All Properties Edit Links Queries & Connections Data Types Sort & Filter Filter Reapply Advanced Text to Columns What-If Analysis Forecast Sheet Group Ungroup Subtotal Data Analysis Solver

1	year	city	country	avg. temp	year	avg. temp	moving a
2	1848	Riyadh	Saudi Arat	24.56	1848	7.98	#N/A
3	1849	Riyadh	Saudi Arat	24.8	1849	7.98	#N/A
4	1850	Riyadh	Saudi Arat	24.34	1850	7.9	#N/A
5	1851	Riyadh	Saudi Arat	25.03	1851	8.18	#N/A
6	1852	Riyadh	Saudi Arat	24.85	1852	8.1	#N/A
7	1853	Riyadh	Saudi Arat	24.93	1853	8.04	#N/A
8	1854	Riyadh	Saudi Arat	24.72	1854	8.21	#N/A
9	1855	Riyadh	Saudi Arat	24.92	1855	8.11	#N/A
10	1856	Riyadh	Saudi Arat	24.57	1856	8	#N/A
11	1857	Riyadh	Saudi Arat	24.26	1857	7.76	24.698
12	1858	Riyadh	Saudi Arat	25.01	1858	8.1	24.743
13	1859	Riyadh	Saudi Arat	24.95	1859	8.25	24.758
14	1860	Riyadh	Saudi Arat	24.94	1860	7.96	24.818
15	1861	Riyadh	Saudi Arat	24.13	1861	7.85	24.728
16	1862	Riyadh	Saudi Arat	23.77	1862	7.56	24.62
17	1863	Riyadh	Saudi Arat	24.28	1863	8.11	24.555
18	1864	Riyadh	Saudi Arat	25.03	1864	7.98	24.586
19	1865	Riyadh	Saudi Arat	25.23	1865	8.18	24.617
20	1866	Riyadh	Saudi Arat	24.92	1866	8.29	24.652
21	1867	Riyadh	Saudi Arat	25.22	1867	8.44	24.748
22	1868	Riyadh	Saudi Arat	25	1868	8.25	24.747
23	1869	Riyadh	Saudi Arat	25.3	1869	8.43	24.782
24	1870	Riyadh	Saudi Arat	25.02	1870	8.2	24.79
25	1871	Riyadh	Saudi Arat	24.73	1871	8.12	24.85
26	1872	Riyadh	Saudi Arat	24.87	1872	8.19	24.96
27	1873	Riyadh	Saudi Arat	25.24	1873	8.35	25.056
28	1874	Riyadh	Saudi Arat	24.98	1874	8.43	25.051
29	1875	Riyadh	Saudi Arat	24.43	1875	7.86	24.971
30	1876	Riyadh	Saudi Arat	24.89	1876	8.08	24.968

results_7 results_8 Sheet1

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Get Data From Text/CSV Recent Sources From Web Existing Connections Refresh All Properties Edit Links Queries & Connections Data Types Sort & Filter Filter Reapply Advanced Text to Columns What-If Analysis Forecast Sheet Group Ungroup Subtotal Data Analysis Solver

1	year	city	country	avg. temp	year	avg. temp	moving a	moving a
2	1848	Riyadh	Saudi Arat	24.56	1848	7.98	#N/A	#N/A
3	1849	Riyadh	Saudi Arat	24.8	1849	7.98	#N/A	#N/A
4	1850	Riyadh	Saudi Arat	24.34	1850	7.9	#N/A	#N/A
5	1851	Riyadh	Saudi Arat	25.03	1851	8.18	#N/A	#N/A
6	1852	Riyadh	Saudi Arat	24.85	1852	8.1	#N/A	#N/A
7	1853	Riyadh	Saudi Arat	24.93	1853	8.04	#N/A	#N/A
8	1854	Riyadh	Saudi Arat	24.72	1854	8.21	#N/A	#N/A
9	1855	Riyadh	Saudi Arat	24.92	1855	8.11	#N/A	#N/A
10	1856	Riyadh	Saudi Arat	24.57	1856	8	#N/A	#N/A
11	1857	Riyadh	Saudi Arat	24.26	1857	7.76	24.698	8.026
12	1858	Riyadh	Saudi Arat	25.01	1858	8.1	24.743	8.038
13	1859	Riyadh	Saudi Arat	24.95	1859	8.25	24.758	8.065
14	1860	Riyadh	Saudi Arat	24.94	1860	7.96	24.818	8.071
15	1861	Riyadh	Saudi Arat	24.13	1861	7.85	24.728	8.038
16	1862	Riyadh	Saudi Arat	23.77	1862	7.56	24.62	7.984
17	1863	Riyadh	Saudi Arat	24.28	1863	8.11	24.555	7.991
18	1864	Riyadh	Saudi Arat	25.03	1864	7.98	24.586	7.968
19	1865	Riyadh	Saudi Arat	25.23	1865	8.18	24.617	7.975
20	1866	Riyadh	Saudi Arat	24.92	1866	8.29	24.652	8.004
21	1867	Riyadh	Saudi Arat	25.22	1867	8.44	24.748	8.072
22	1868	Riyadh	Saudi Arat	25	1868	8.25	24.747	8.087
23	1869	Riyadh	Saudi Arat	25.3	1869	8.43	24.782	8.105
24	1870	Riyadh	Saudi Arat	25.02	1870	8.2	24.79	8.129
25	1871	Riyadh	Saudi Arat	24.73	1871	8.12	24.85	8.156
26	1872	Riyadh	Saudi Arat	24.87	1872	8.19	24.96	8.219
27	1873	Riyadh	Saudi Arat	25.24	1873	8.35	25.056	8.243
28	1874	Riyadh	Saudi Arat	24.98	1874	8.43	25.051	8.288
29	1875	Riyadh	Saudi Arat	24.43	1875	7.86	24.971	8.256
30	1876	Riyadh	Saudi Arat	24.89	1876	8.08	24.968	8.235

results_7 results_8 Sheet1

Line chart

To make the data visualized we will use the line chart

- Insert -> charts ->  ->  -> click on chart design



