Bangladesh University of Business & Technology

Dhaka, Commerce College Road

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Course Code : **CSE 4176**

Course Title : **Data Mining Lab**

Assignment - 2

Submitted By	Submitted To
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CO2 Apply calculating mathematical statistics techniques (such as: mean -

average value, median - middle value, median - middle value, median - middle value) in the following dataset - https://www.kaggle.com/datasets/muthuj7/weather-dataset

1.Import library

```
import pandas as pd
```

2. Upload the dataset & Viewing the data

```
weather=pd.read_csv("/content/weatherHistory.csv")
weather
```

	Formatted Date	Summary	Precip Type	Temperature (C)	Apparent Temperature (C)	Humidity	Wind Speed (km/h)	Wind Bearing (degrees)	Visibility (km)	Loud Cover	Pressure (millibars)	Daily Summary
0	2006-04-01 00:00:00.000 +0200	Partly Cloudy	rain	9.472222	7.388889	0.89	14.1197	251.0	15.8263	0.0	1015.13	Partly cloudy throughout the day.
1	2006-04-01 01:00:00.000 +0200	Partly Cloudy	rain	9.355556	7.227778	0.86	14.2646	259.0	15.8263	0.0	1015.63	Partly cloudy throughout the day.
2	2006-04-01 02:00:00.000 +0200	Mostly Cloudy	rain	9.377778	9.377778	0.89	3.9284	204.0	14.9569	0.0	1015.94	Partly cloudy throughout the day.
3	2006-04-01 03:00:00.000 +0200	Partly Cloudy	rain	8.288889	5.944444	0.83	14.1036	269.0	15.8263	0.0	1016.41	Partly cloudy throughout the day.
4	2006-04-01 04:00:00.000 +0200	Mostly Cloudy	rain	8.755556	6.977778	0.83	11.0446	259.0	15.8263	0.0	1016.51	Partly cloudy throughout the day.
...	...	...	...	...	...	...	...	...	...	...	...	...
55362	2012-02-03 18:00:00.000 +0100	Foggy	snow	-10.000000	-16.150000	0.84	12.8800	10.0	2.5760	0.0	1028.10	Foggy starting in the morning continuing until...
55363	2012-02-03 19:00:00.000 +0100	Foggy	snow	-10.033333	-15.861111	0.85	11.7530	18.0	2.3828	0.0	1028.09	Foggy starting in the morning continuing until...
55364	2012-02-03 20:00:00.000 +0100	Foggy	snow	-10.000000	-16.150000	0.84	12.8800	20.0	1.2880	0.0	1028.10	Foggy starting in the morning continuing until...
55365	2012-02-03 21:00:00.000 +0100	Foggy	snow	-10.000000	-15.666667	0.84	11.2700	20.0	1.2880	0.0	1028.20	Foggy starting in the morning continuing until...
55366	2012-02-03 22:00:00.000 +0100	Foggy	snow	-9.950000	-15.394444	0.85	10.6421	16.0	1.4329	0.0	1028.00	NaN

55367 rows × 12 columns

3.View the top 10 rows of the dataset.

```
weather.head(10)
```

	Formatted Date	Summary	Precip Type	Temperature (C)	Apparent Temperature (C)	Humidity	Wind Speed (km/h)	Wind Bearing (degrees)	Visibility (km)	Loud Cover	Pressure (millibars)	Daily Summary
0	2006-04-01 00:00:00.000 +0200	Partly Cloudy	rain	9.472222	7.388889	0.89	14.1197	251.0	15.8263	0.0	1015.13	Partly cloudy throughout the day.
1	2006-04-01 01:00:00.000 +0200	Partly Cloudy	rain	9.355556	7.227778	0.86	14.2646	259.0	15.8263	0.0	1015.63	Partly cloudy throughout the day.
2	2006-04-01 02:00:00.000 +0200	Mostly Cloudy	rain	9.377778	9.377778	0.89	3.9284	204.0	14.9569	0.0	1015.94	Partly cloudy throughout the day.
3	2006-04-01 03:00:00.000 +0200	Partly Cloudy	rain	8.288889	5.944444	0.83	14.1036	269.0	15.8263	0.0	1016.41	Partly cloudy throughout the day.
4	2006-04-01 04:00:00.000 +0200	Mostly Cloudy	rain	8.755556	6.977778	0.83	11.0446	259.0	15.8263	0.0	1016.51	Partly cloudy throughout the day.
5	2006-04-01 05:00:00.000 +0200	Partly Cloudy	rain	9.222222	7.111111	0.85	13.9587	258.0	14.9569	0.0	1016.66	Partly cloudy throughout the day.
6	2006-04-01 06:00:00.000 +0200	Partly Cloudy	rain	7.733333	5.522222	0.95	12.3648	259.0	9.9820	0.0	1016.72	Partly cloudy throughout the day.
7	2006-04-01 07:00:00.000 +0200	Partly Cloudy	rain	8.772222	6.527778	0.89	14.1519	260.0	9.9820	0.0	1016.84	Partly cloudy throughout the day.
8	2006-04-01 08:00:00.000 +0200	Partly Cloudy	rain	10.822222	10.822222	0.82	11.3183	259.0	9.9820	0.0	1017.37	Partly cloudy throughout the day.
9	2006-04-01 09:00:00.000 +0200	Partly Cloudy	rain	13.772222	13.772222	0.72	12.5258	279.0	9.9820	0.0	1017.22	Partly cloudy throughout the day.

4.Showing the mean -average value,

```
[14] import statistics
```

```
mean=statistics.mean(weather["Humidity"])

print("Mean of Humidity is:", mean)
```

```
Mean of Humidity is: 0.7312608593566565
```

5.Showing the median - middle value,

```
median=statistics.median(weather["Humidity"])

print("Median of Humidity is:", median)
```

```
Median of Humidity is: 0.78
```

6. Showing the mode value

```
mode=statistics.mode(weather["Humidity"])

print("Mode of Humidity is:", mode)
```

```
Mode of Humidity is: 0.93
```

7.Showing the Standard deviation value

```
stdev=statistics.stdev(weather["Humidity"])

print("Standard deviation of Humidity is:", stdev)
```

```
Standard deviation of Humidity is: 0.19565322439944888
```