

Bangladesh University of Business & Technology

Dhaka, Commerce College Road

Mirpur-2, Dhaka-1216



Course Code : CSE 4176

Course Title : Data Mining Lab

Assignment - 2

Submitted By	Submitted To
Pallab Majumdar Id:18192103050 Intake:41 sec:03	Khan Md. Hasib Assistant Professor Dept of CSE, BUBT

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. Upload the dataset & Viewing the data

✓ 0s

```
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 x 13 columns

2. View the top 10 rows of the dataset.

✓ 0s

```
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.
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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 value of the Humidity Column,

✓
0s [14] `import statistics`

✓
0s `mean=statistics.mean(weather["Humidity"])`
`print("Mean of Humidity is:", mean)`

Mean of Humidity is: 0.7312608593566565

4. Showing the median value

✓
0s `median=statistics.median(weather["Humidity"])`
`print("Median of Humidity is:", median)`

Median of Humidity is: 0.78

5. Showing the mode value

✓
0s `mode=statistics.mode(weather["Humidity"])`
`print("Mode of Humidity is:", mode)`

Mode of Humidity is: 0.93

6 . Showing the Standard deviation value

✓
0s `stdev=statistics.stdev(weather["Humidity"])`
`print("Standard deviation of Humidity is:", stdev)`

Standard deviation of Humidity is: 0.19565322439944888