Dataset Source : https://power.larc.nasa.gov/data-access-viewer/

Region Selected : Satara

        latitude : 17.6805
        longitude : 74.0183

The Parameters in The dataset :
(Temperature , Min_Temperature , Max_Temperature , Humidity , Precipitation , Surface_Pressure , Wind_speed).

The Timeline Used is : (MAY 202 – JULY 2023)

(MAY 202 – JULY 2023)

	Month	Days	YEAR	Date	Min_Temperature	Temperature	Max_Temperature	Humidity	Precipitation	Surface_Pressure	Wind_speed
0	May	1	2023	01-05-2023	16.69	20.71	37.40	11.05	0.04	93.45	2.87
1	May	2	2023	02-05-2023	17.34	19.51	36.84	11.23	0.00	93.52	3.23
2	May	3	2023	03-05-2023	13.88	21.78	35.66	13.31	0.36	93.65	2.59
3	May	4	2023	04-05-2023	11.23	21.81	33.04	13.06	0.30	93.61	2.30
4	May	5	2023	05-05-2023	12.65	21.56	34.21	12.45	0.21	93.52	2.84

Plotting for Temperature , Min_Temperature , Max_Temperature , Humidity , Precipitation :

X-Axis : Values (C / mm)
Y-Axis : Number of days (MAY 2023 – JULY 2023) – 90 Days
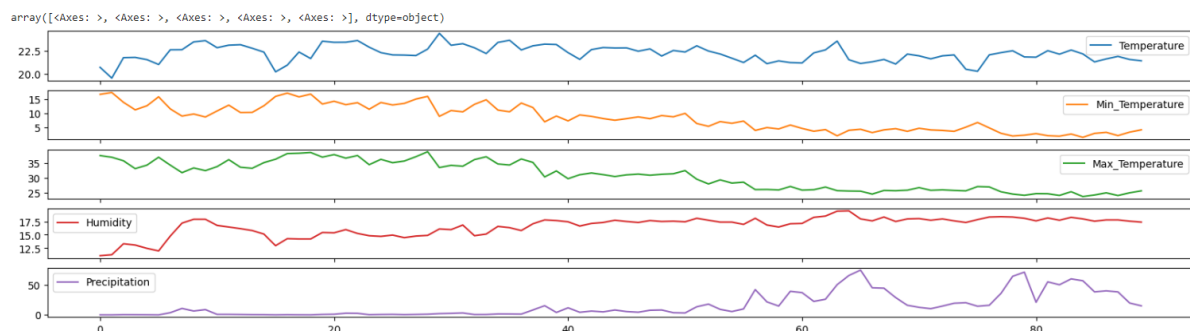
(c) is considered for the Temperature , Humidity .
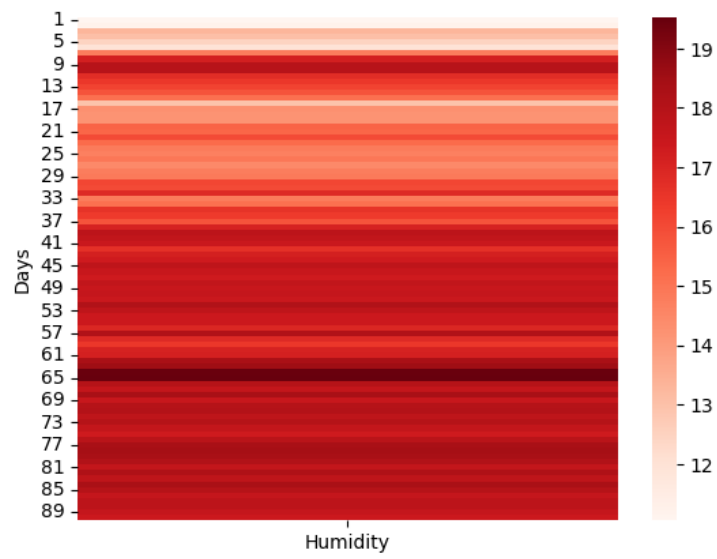(Mm/day) is considered for the Precipitation .

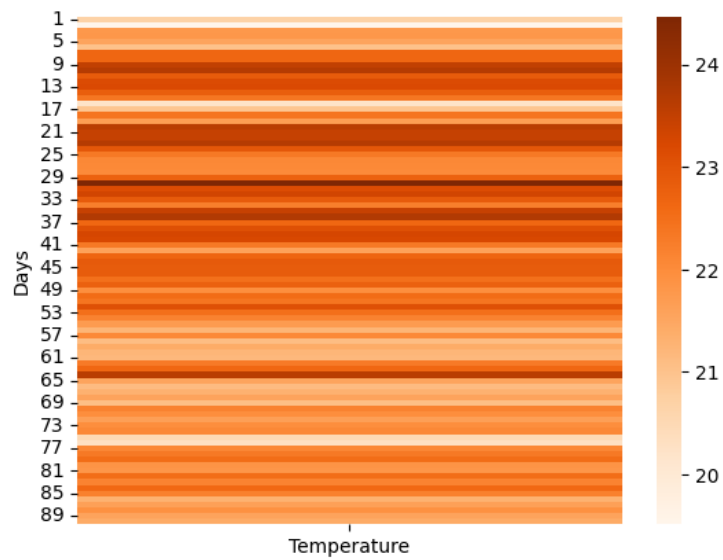**For whole Data Set :**

```
Mean Temperature : 22.237222222222222
Mean Humidity : 16.625444444444444
Mean Precipitation : 15.80244444444445
```
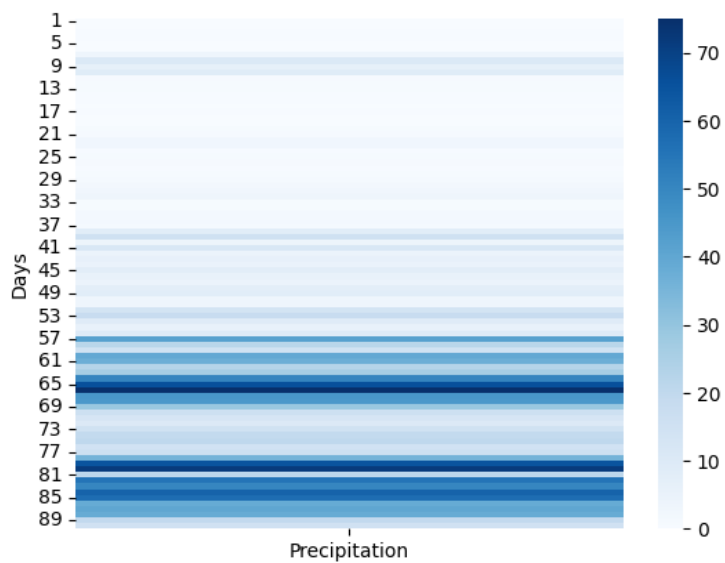
Heat Map : Humidity

Days

Humidity

Heat Map : Temperature

Days

Temperature

Heat Map : Precipitation

Days

Precipitation

Calculated Values for Each Month By performing Operations on Dataset .

	Year	Month	Mean Temperature (C)	Mean Humidity (C)	Mean Preciptaion (mm/day)
Linear Regression Model	2023	May	22.40548387	14.83064516	1.653870968
		June	22.43033333	17.101	10.60966667
		July	21.85758621	18.05206897	36.29862069

Mean Squared Error	
	1.058754535
	0.281763195
	0.04853582

Using Linear Regression Model :

X-Axis : Temperature (C)
Y-Axis : Number of Months (Jan 2022 – March 2023)

Mean Temperature Vs Mean Humidity
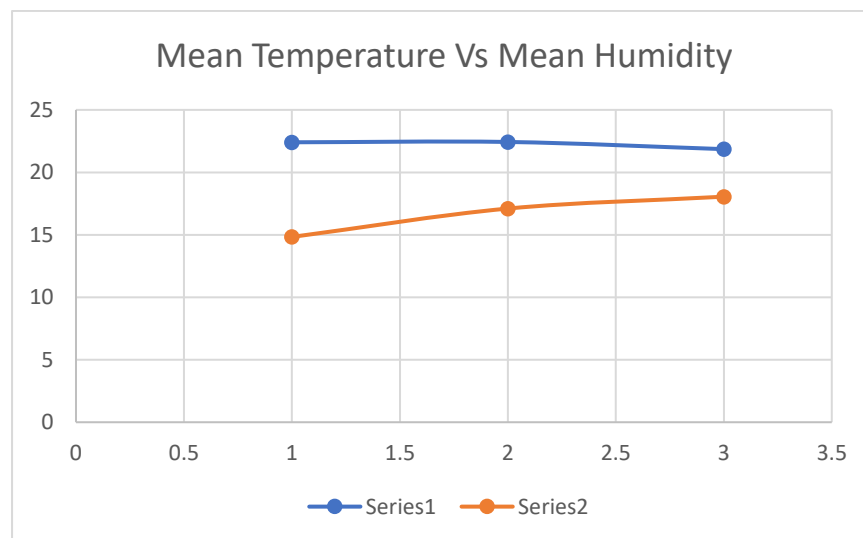
Year	Month	Mean Temperature (C)	Mean Humidity (C)
2023	May	22.40548387	14.83064516
	June	22.43033333	17.101
	July	21.85758621	18.05206897

Actual Values : Dataset Provided By Nasa
Predicted Values : Done by Training and testing and using Formula .

$$y = b0 + b1 * x$$

where:

- y is the predicted value
- b0 is the y-intercept (constant term).
- b1 is the coefficient (slope)
- X is Actual Value