

TELANGANA WEATHER INSIGHTS

TEAM

LUNATIC



Weather Report Analysis Dashboard

Understand climate
patterns and compare
seasonal variations
across multiple regions.



Rainfall Analysis

Examine rainfall data and seasonal trends.



Humidity Patterns

Track yearly humidity variations.



Comprehensive Weather Insights

View all key weather metrics together.



Temperature Insights

Analyze temperature changes across regions.



Wind Speed Analysis

Monitor and compare wind speed patterns.

Rainfall Analysis

Rainiest District

Nizamabad

Total Rainfall (mm)

2.05M

Avg Rainfall (mm)

2.91

Least Rainfall District

Jogulamba...

Year

All

District & Mandal

All

Month

All

Metric

Humidity

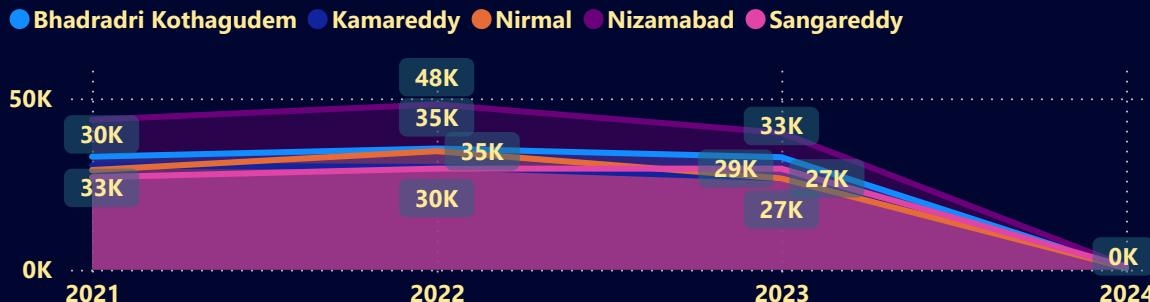
Highest Average Rainfall by District



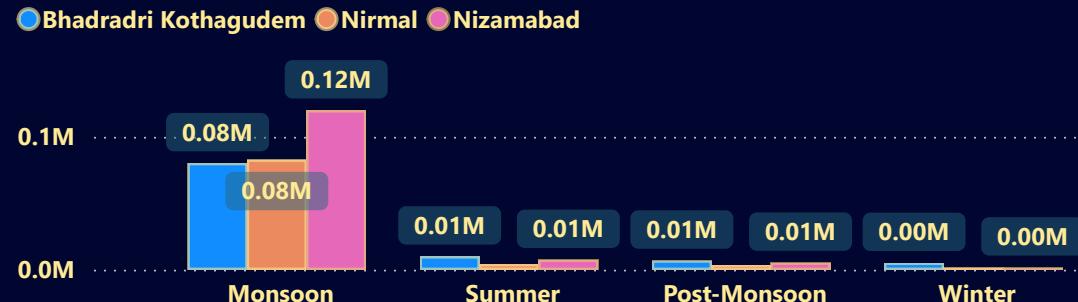
Monthly Rainfall Distribution by Mandal



Yearly Rainfall Trend by District



Seasonal Rainfall Variation Across Districts



Rainfall Analysis



Monthly % of Annual Rainfall

99.71

Year

All

Heavy Rain Days Records

2K

District & Mandal

All

Rainfall YoY Change

-0.99

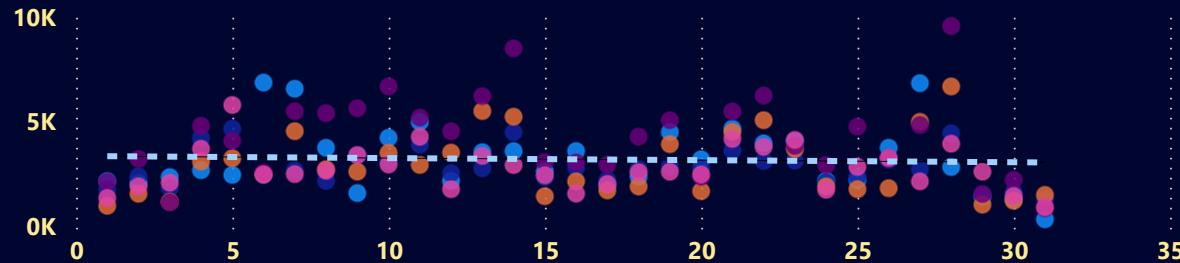
01-01-2021

24-03-2024



Rainfall Patterns on Key Dates

● Bhadradi Kothagudem ● Kamareddy ● Nirmal ● Nizamabad ● Sangareddy



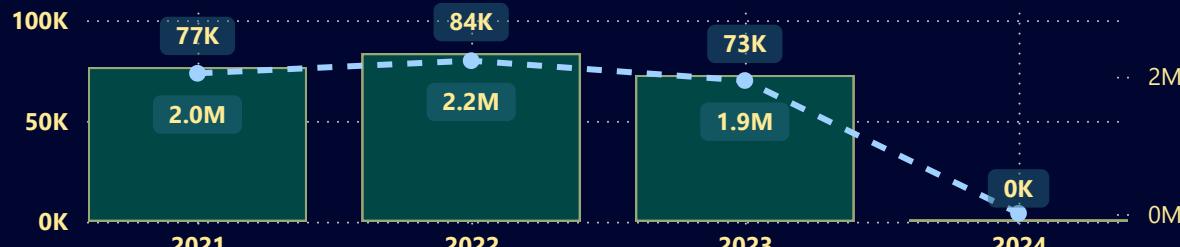
Annual Rainfall Comparison Between Districts

● Nizamabad ● Bhadradi Kothagudem



Rainfall Anomalies Over the Years

● Sum of Rain (mm) ● Rainfall Anomaly (%)



Monthly Share of Annual Rainfall (%)



Temperature Insights



Avg Max Temp (°C)

33.97

Avg Min Temp (°C)

21.75

Avg Daily Temp Range (°C)

12.23

Monthly Temp Range (°C)

12.25

Year

All

District & Mandal

All

Month

All

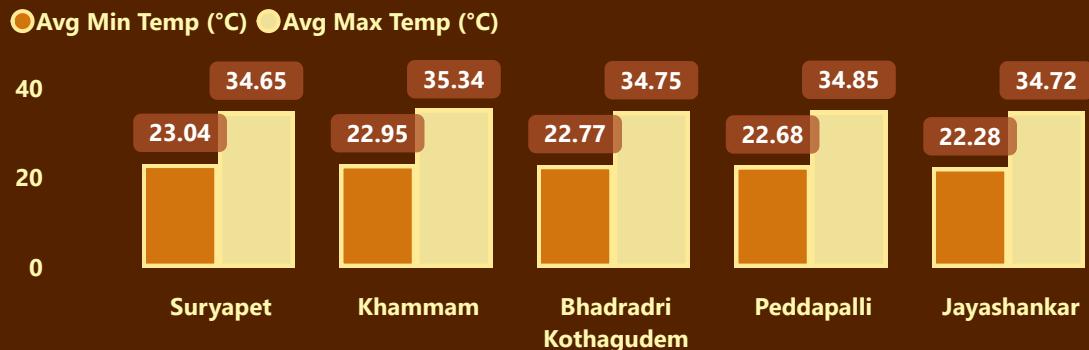
Metric

Humidity

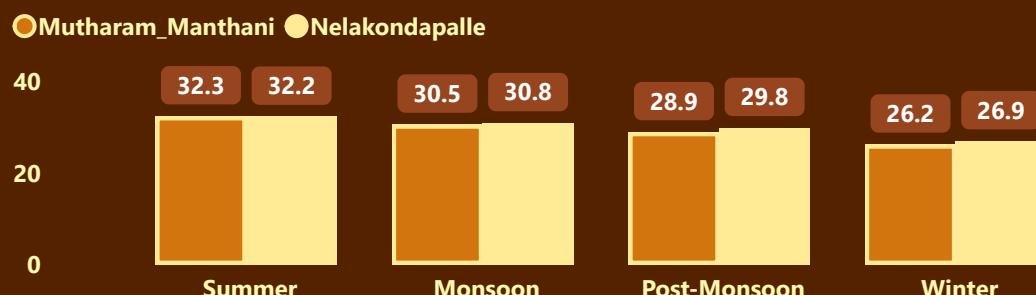
Avg Daily Temperature Range by District



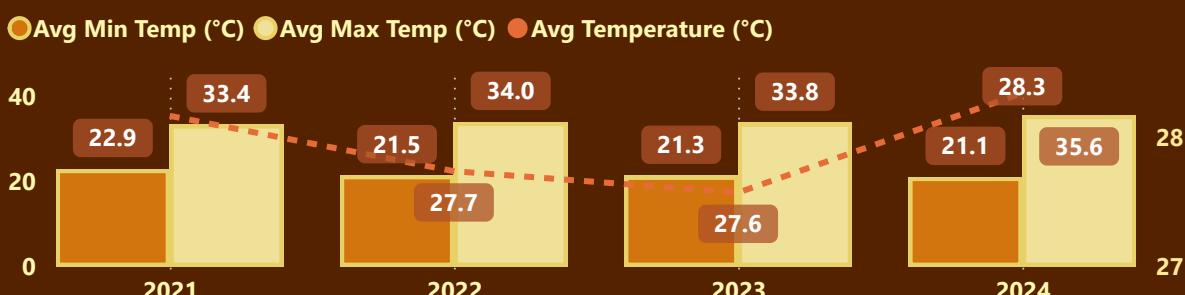
Average Min & Max Temperature by District



Seasonal Avg Temperature Variation by Mandal



Yearly Trend of Min & Max Temperatures



Temperature Insights



Hottest District Name

Khammam

Year

All

Heatwave Days Records

51K

Temp YoY Change

0.05

Coldest District Name

Vikarabad

District & Mandal

All

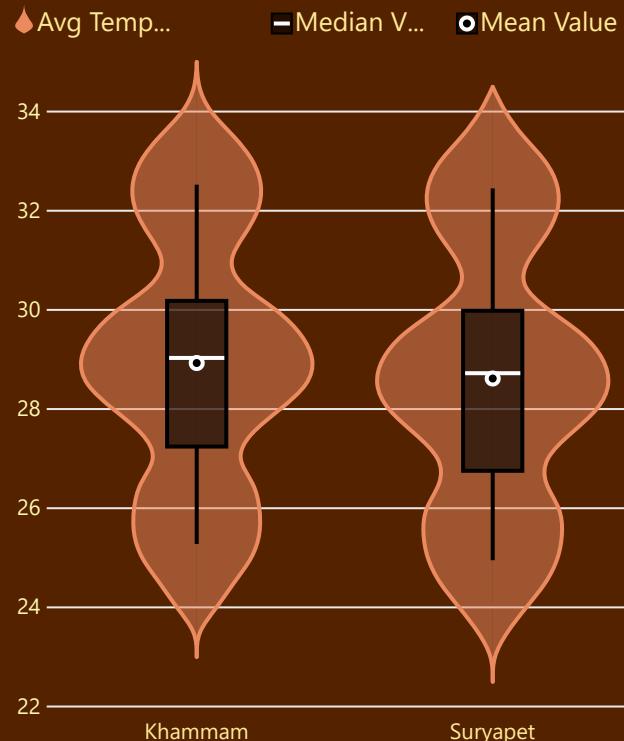
Month

All

Metric

Humidity

Temperature Distribution Between Two Districts



Correlation Between Avg Min & Max Temperatures



Monthly Temperature Comparison Between Two Districts



District

District	2021	2022	2023	2024
Adilabad	-0.18	0.08	-0.10	0.35
Bhadradri Kothagudem	0.12	0.19	0.17	0.49
Hanumakonda	-0.51	0.05	-0.09	0.24
Hyderabad	-0.35	-0.22	-0.18	0.50
Jagtial	0.08	0.20	0.13	0.42
Jangaon	-0.09	0.00	-0.03	0.23
Jayashankar	0.05	0.23	0.16	0.53
Jogulamba Gadwal	-0.18	-0.06	0.00	0.67
Kamareddy	-0.26	-0.07	-0.20	0.27
Karimnagar	0.00	0.10	-0.02	0.28
Khammam	0.29	0.32	0.32	0.67
Kumuram Bheem	-0.15	0.00	-0.08	0.35
Mahabubabad	-0.01	0.10	0.12	0.53
Mahabubnagar	-0.31	-0.12	-0.12	0.53
Mancherial	0.00	0.10	0.09	0.47
Medak	-0.36	-0.25	-0.33	0.23
Medchal-Malkajgiri	-0.32	-0.16	-0.16	0.44
Mulugu	0.02	0.18	0.13	0.58
Nagarkurnool	-0.39	-0.16	-0.16	0.52

Humidity Patterns



Average Humidity (%)

67.31

Avg Min Humidity (%)

45.55

Extreme Wind Count Records

21.965K

Avg Daily Humidity Range (%)

61.17

Year

District & Mandal

All

All

Month

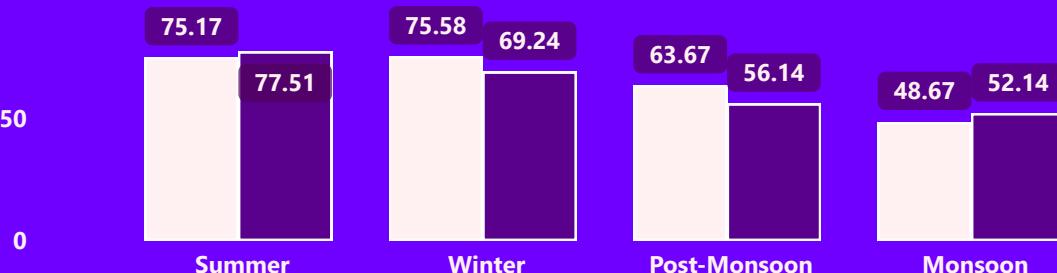
All

Metric

Humidity

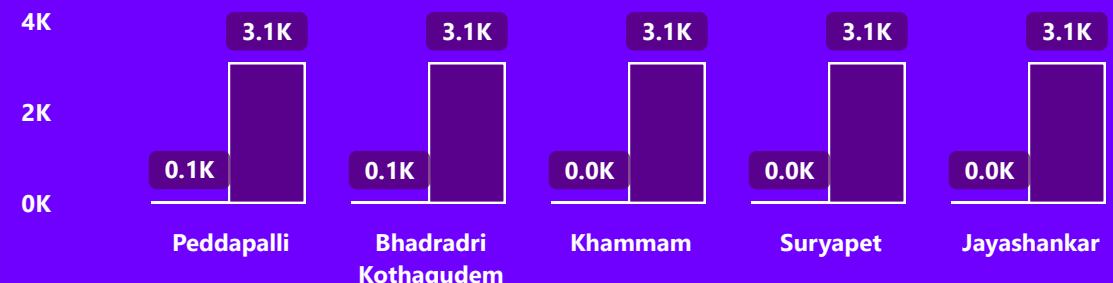
Daily Humidity Range by District

Kamareddy O Nalgonda



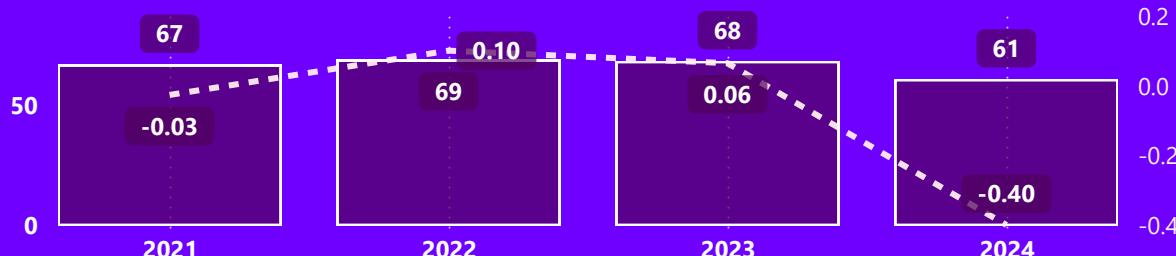
Average Min & Max Humidity by District

Avg Min Humidity (%) O Extreme Wind Count



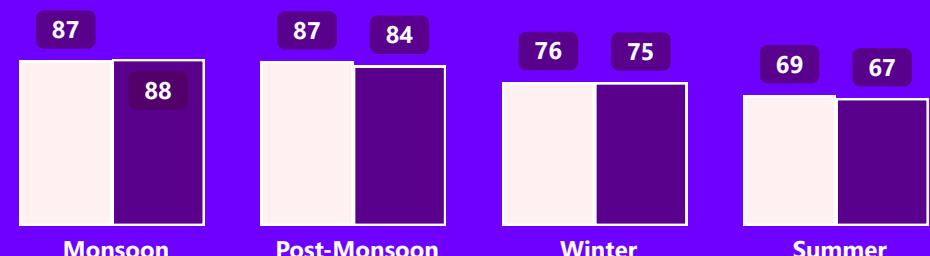
Humidity Anomalies Over the Years

Average Humidity (%) ● Humidity Z-Score



Seasonal Humidity Variation by Mandal

Burgampadu O Elgaid



Humidity Patterns

Most Humid District
Peddapalli

Year
All

Extreme Humidity Records
455K

District & Mandal
All

Humidity YoY Change
-0.11

Month
All

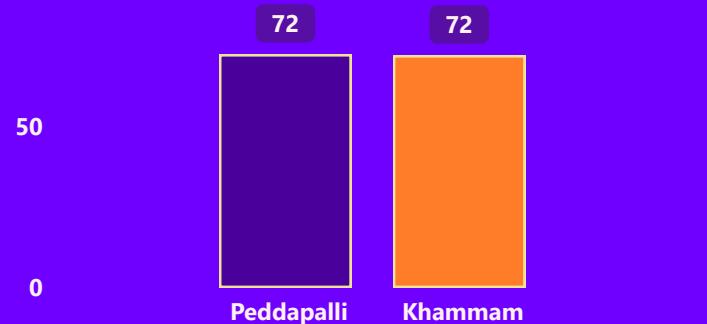
Least Humid District
Hyderabad

Metric
Humidity

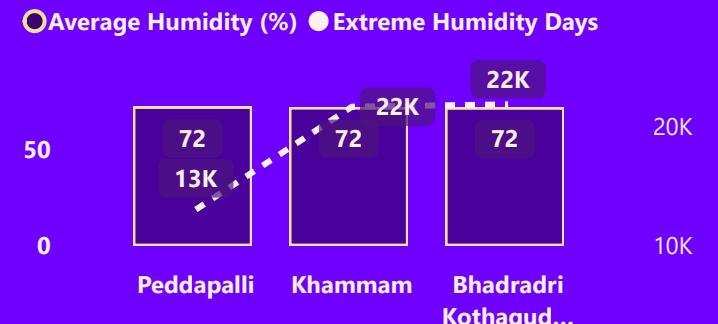
Humidity Distribution Between Two Districts



Humidity Comparison Between Two Districts



Extreme Humidity Days by District



Yearly Trend of Min & Max Humidity



Wind Speed Analysis

Avg Wind (Kmph)

4.85

Year

All

Avg Min Wind (Kmph)

0.13

District & Mandal

All

Avg Max Wind (Kmph)

9.57

Avg Daily Wind Range...

19.80

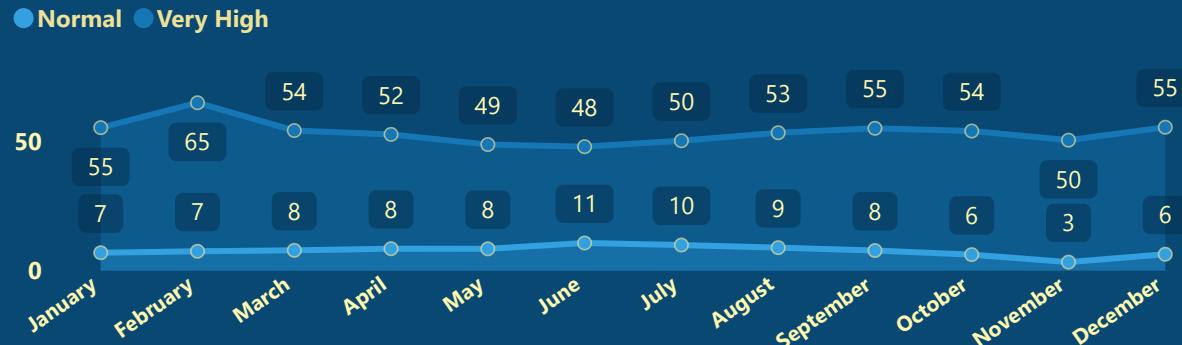
Month

All

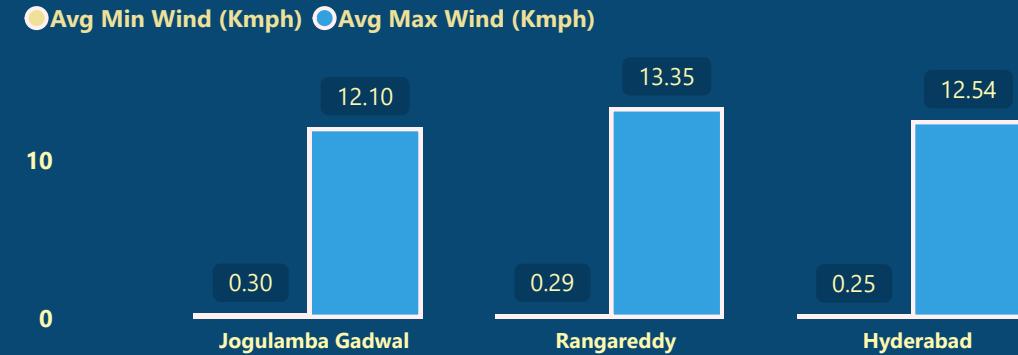
Metric

Humidity

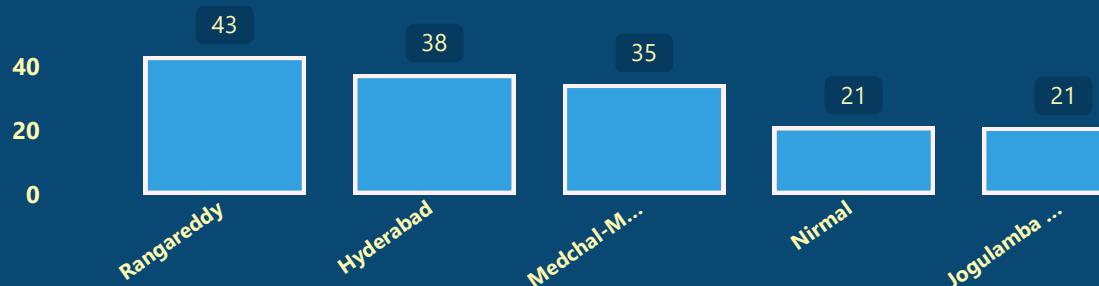
Wind Speed Patterns & Outliers



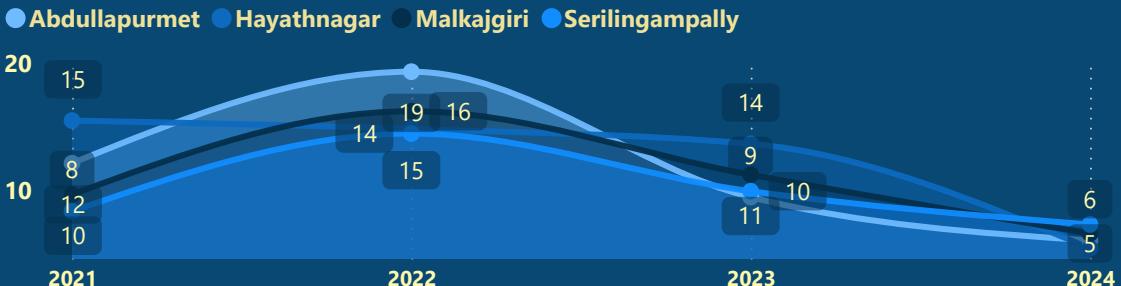
Average Min & Max Wind Speed by District



Daily Wind Speed Range by District



Yearly Wind Speed Variation by Mandal



Wind Speed Analysis 🌬

Highest Wind Speed...
Rangareddy

Year
All

High Wind Days
61

District & Mandal
All

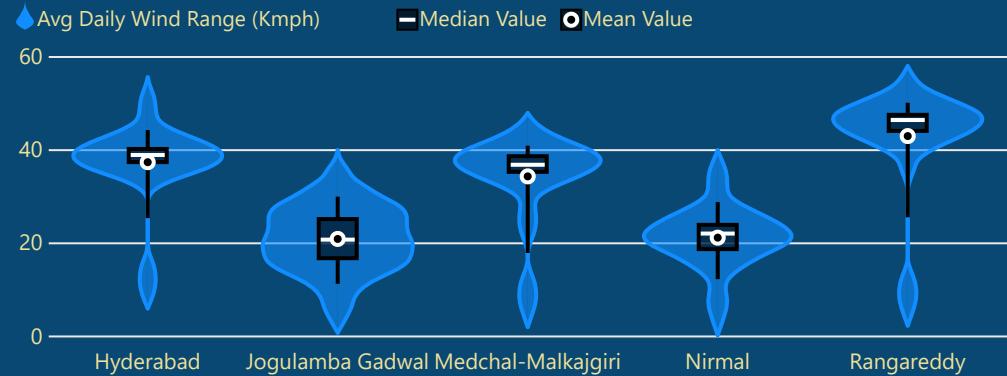
Wind YoY Change
-0.05

Month
All

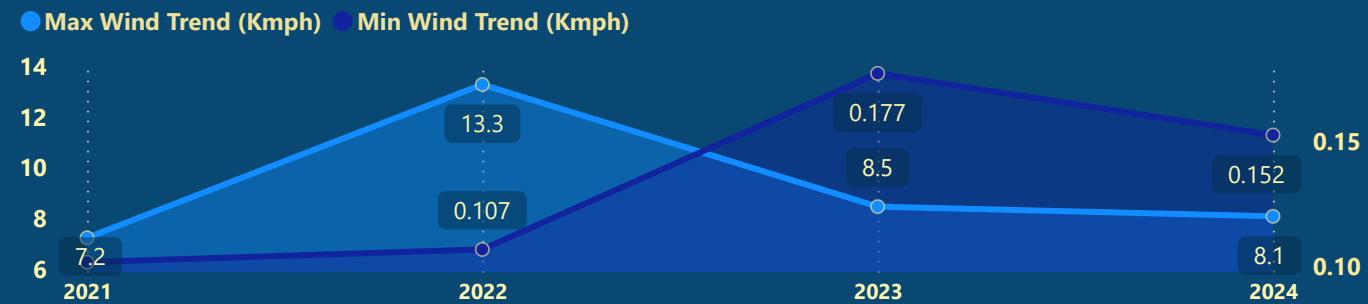
Lowest Wind Speed...
Mahabubabad

Metric
Humidity

Wind Speed Distribution Across Districts



Trend of Min & Max Wind Speeds Over Years



Wind Speed Comparison Between Two Districts



Extreme Wind Speed Periods by District





Comprehensive Weather Insights

Avg Rainfall (mm)

2.91

Year

All

Avg Temperature (°C)

27.86

District & Mandal

All

Average Humidity (%)

67.31

Avg Wind (Kmph)

4.85

Month

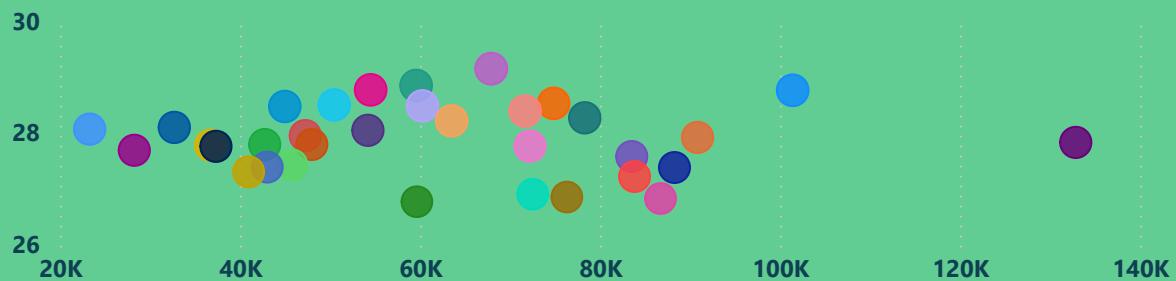
All

Metric

Humidity

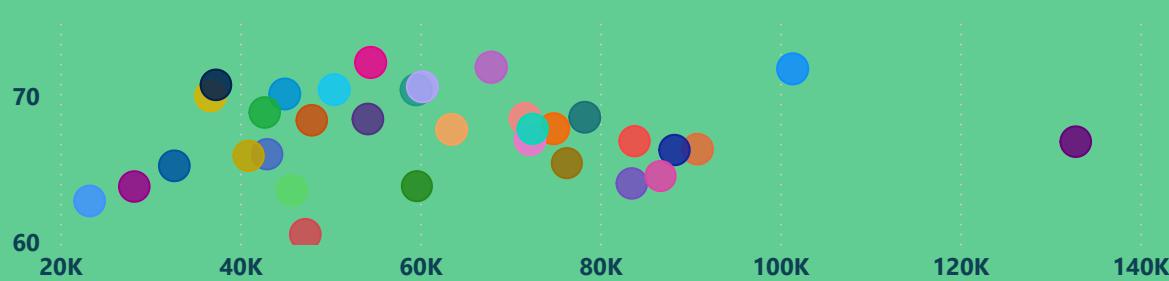
Rainfall vs Temperature

● Adilabad ● Bhadrak Kot... ● Hanumak... ● Hyderabad ● Jagtial ● Jangaon ● Jayashankar



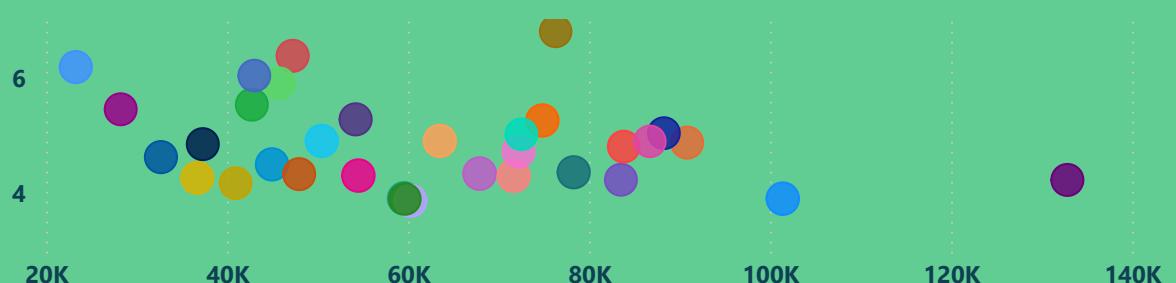
Rainfall vs Humidity

● Adilabad ● Bhadrak Kot... ● Hanumak... ● Hyderabad ● Jagtial ● Jangaon ● Jayashankar



Rainfall vs Wind

● Adilabad ● Bhadrak Kot... ● Hanumak... ● Hyderabad ● Jagtial ● Jangaon ● Jayashankar



Corr Rain vs Temp

-0.05

Corr Rain vs Humidity

0.10

Corr Rain vs Wind

-0.28



Comprehensive Weather Insights

Daily Rain Range (mm)

55.91K

Avg Daily Temp Range (°C)

12.23

Avg Daily Humidity Range (%)

61.17

Avg Daily Wind Range (Kmph)

19.80

Year



All



District & Mandal

Month

Metric

All

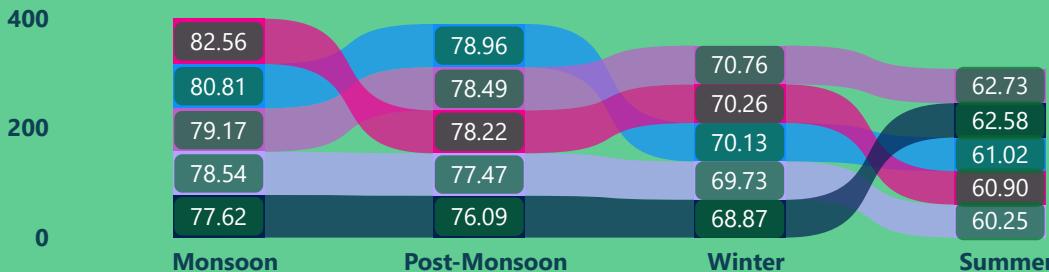


Humidity



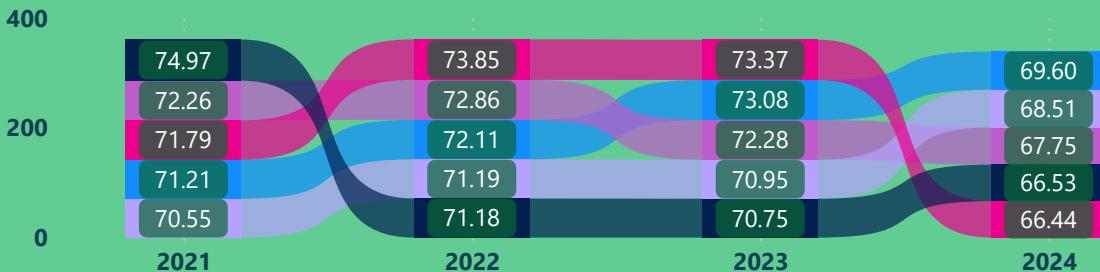
Seasonal Weather Patterns Across Districts

● Bhadrak Kothagudem ● Khammam ● Mahabubabad ● Peddapalli ● Warangal



Yearly Trends in Key Weather Metrics

● Bhadrak Kothagudem ● Khammam ● Mahabubabad ● Peddapalli ● Warangal



Seasonal Weather Metrics Across Districts

District	Seasonal Rainfall (mm)	Seasonal Avg Temp (°C)	Seasonal Avg Humidity (%)	Seasonal Avg Wind Speed (Kmph)
Nizamabad	1,32,860.70	27.83	66.89	4.23
Bhadradri Kothagudem	1,01,410.20	28.76	71.87	3.90
Nirmal	90,840.20	27.92	66.38	4.88
Kamareddy	88,277.40	27.38	66.32	5.05



Comprehensive Weather Insights

Rainfall YoY %

-0.98

Temperature YoY Δ (°C)

0.77

Humidity YoY Δ (%)

-7.54

Wind YoY Δ (Kmph)

-0.20

Year

All

District & Mandal

All

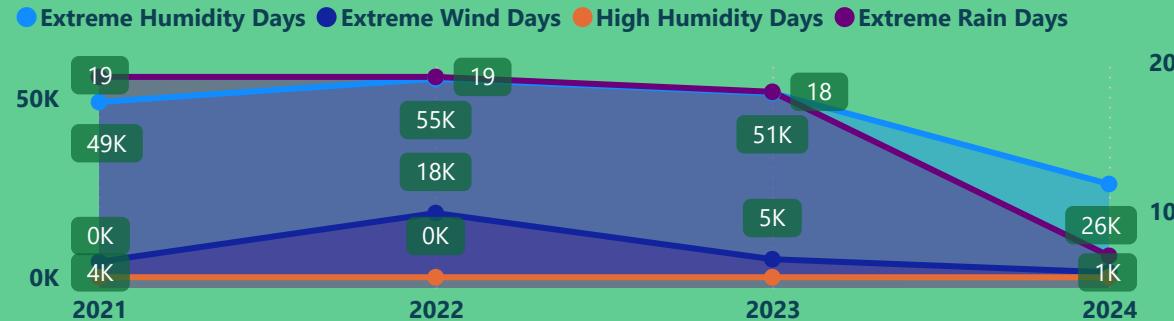
Month

All

Metric

Humidity

Anomalies in Weather Data



Δ Temp when Extreme Rain

-1.57

Δ Wind when Extreme Rain

0.68

Δ Humid when Extreme Rain

20.55

Most Affected District

Mahabubnaga...

Anomalies in Weather Data

District	Rainfall Z-Score	Temperature Z-Score	Humidity Z-Score	Wind Speed Z-Score	Anomaly Flag
Adilabad	0.08	-0.08	-0.20	-0.11	<input checked="" type="checkbox"/> Normal
Bhadradri Kothagudem	0.07	0.26	0.28	-0.17	<input checked="" type="checkbox"/> Normal
Hanumakonda	0.00	-0.02	0.17	-0.11	<input checked="" type="checkbox"/> Normal