

Data for Social Good Hackathon

VISUAL ANALYTICS AND INSIGHTS INTO WEATHER OF TELANGANA

Theme : SDG 13 Climate Change

Team : TechCurious

Participants

Damarla Venkata Sai Chandana

Samudrala Keerthana Pravallika

Kamaneeya Kadari

Gadireddi Chaitanya Deepti

Introduction

- Telangana is a state that is situated in the southern part of India on the Deccan Plateau.
- Telangana is a semi-arid area with a hot and dry climate.
- The monsoon arrives in June and lasts until September with about 755 mm (29.7 inches) of precipitation. A dry, mild winter starts in late November and lasts until early February with little humidity and average temperatures in the 22–23 °C (72–73 °F) range.
- According to the TSDPS, the normal average rainfall in the state during the monsoon that commences on June 1 and ends on September 30 is 720.5 mm. But this year, the state received an average rainfall of 1009.7 mm, which is 40% more than the normal. Out of 122 days of monsoon season, there were rains across the state for as many as 105 days.
- This is only for the third time in the last 15 years that the state witnessed such abnormally high rainfall during the season. However, the rainfall last year was the highest – it was 46% more than the normal.
- Due to continuous rainfall, all major reservoirs on Krishna and Godavari rivers continue to receive huge inflows up to their brim.
- Is the abnormal rainfall due to changes in temperature, humidity and wind?
- In this study we examine: How the change in temperature affects rainfall; how humidity is affecting the levels of rainfall, and how the abnormal rainfall changes the lives of people like farmers.

Theme and Prompt

(SDG 13 Climate Action)

- Agriculture is pivotal to the state of Telangana as it accounts for 16% of its industry. Due to rapid change in the climate this is causing there to be a disruption in the weather patterns.
- This challenge aims to address the looming issue and to create sustainable plans.

PROMPT

- Target and analyze the rainfall and weather patterns in the state of Telangana

Data

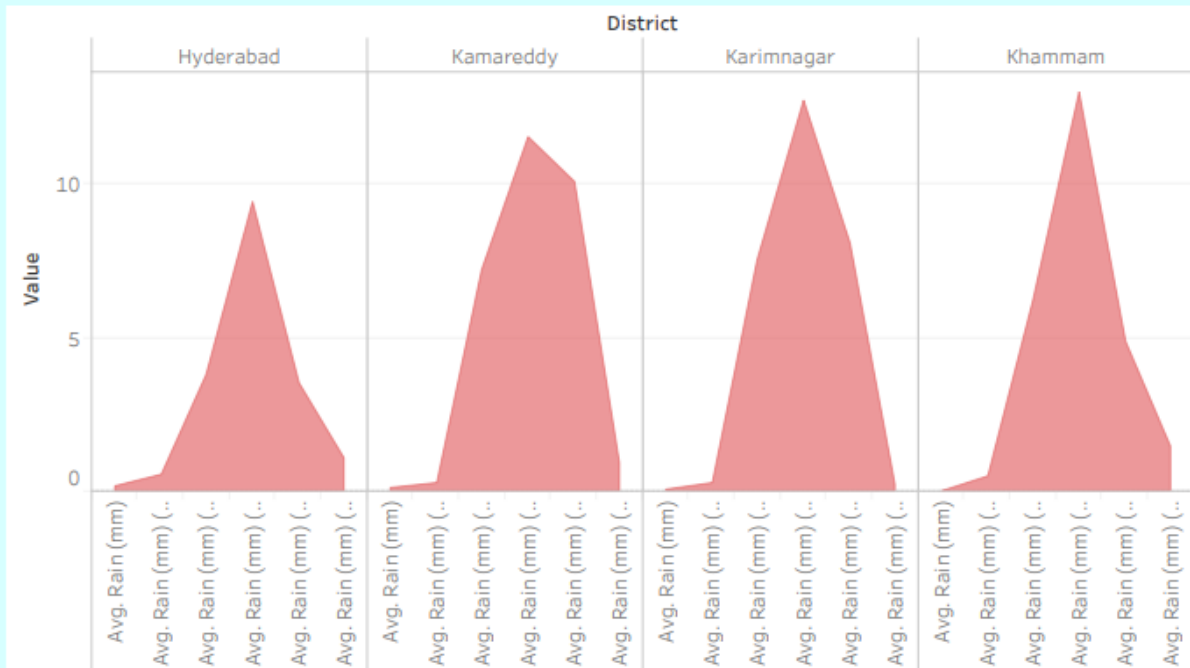
The data regarding rainfall consisting of attributes such as:

- district
- mandal
- date
- max temperature
- min temperature
- max humidity
- mini humidity
- rainfall in mm
- max wind speed
- min wind speed

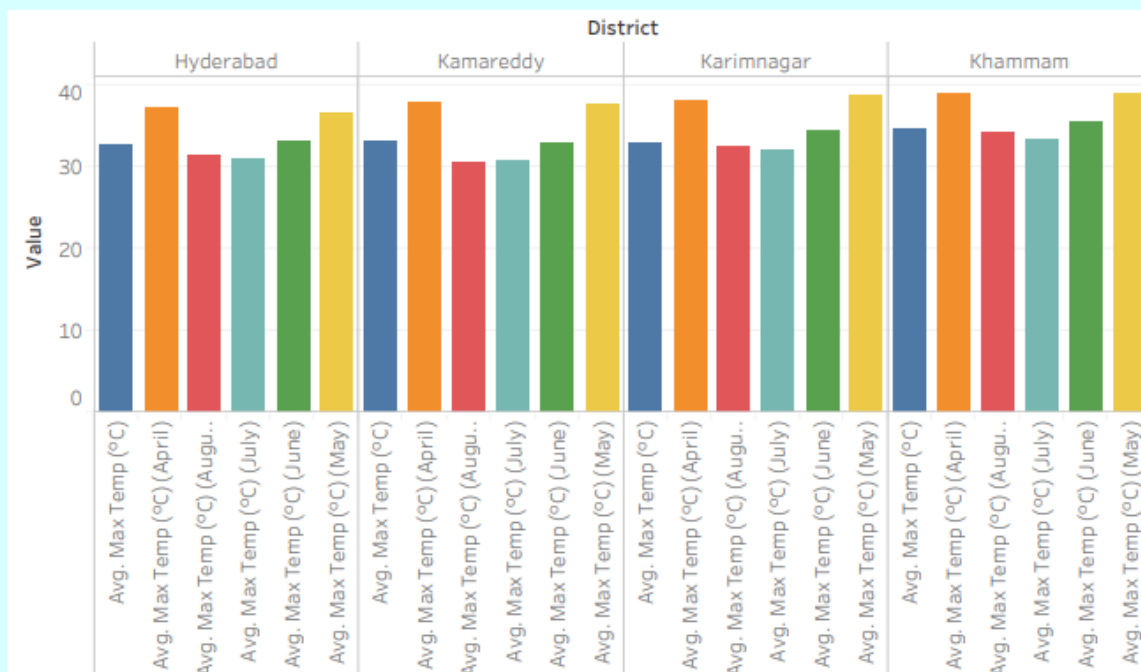
have been used for analysis from the duration of the month January to August in the year 2021. The analysis has been done using Tableau.

Results

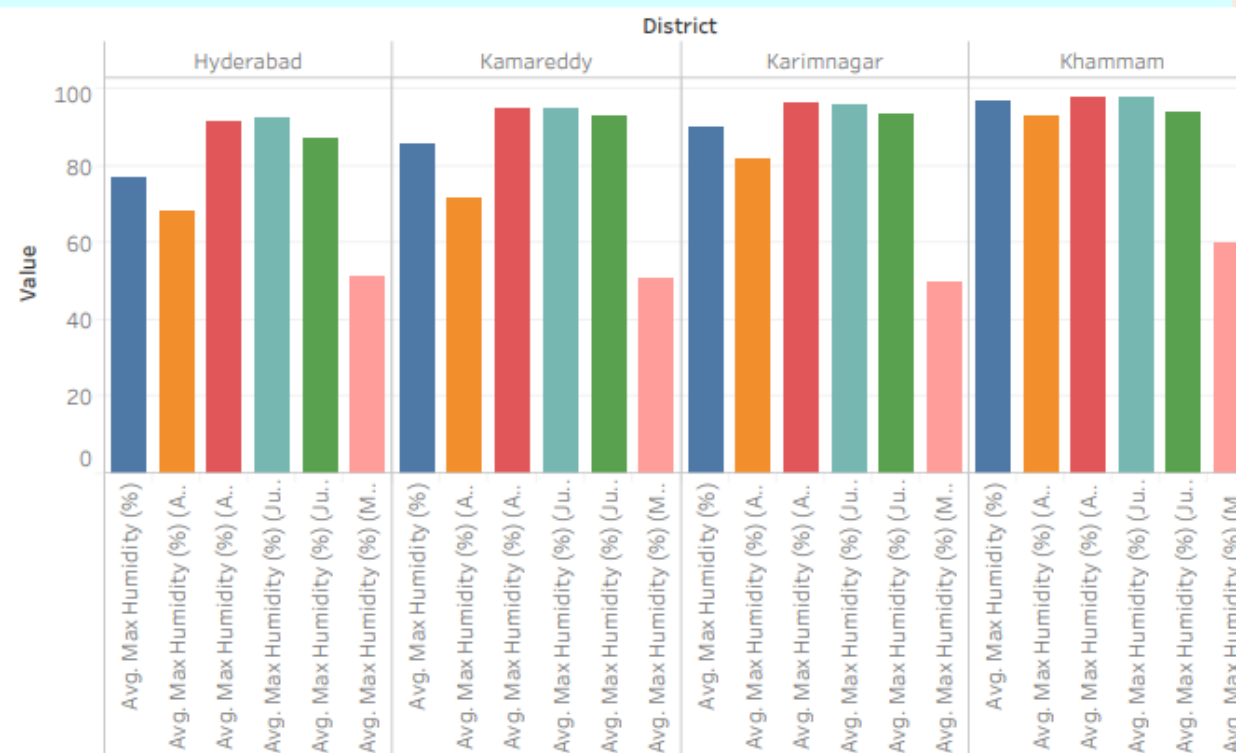
Average RainFall in districts of Telangana across Jan-Aug



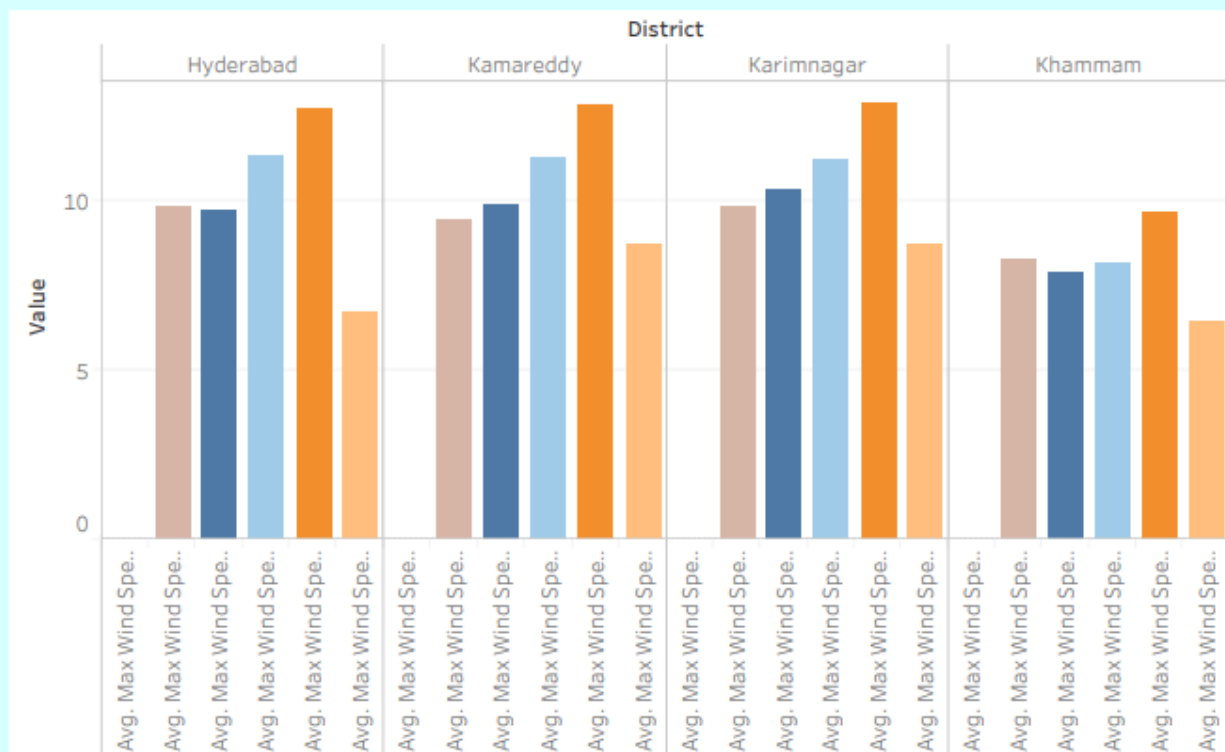
Average Maximum Temperatures of different districts of Telangana across Jan-Aug



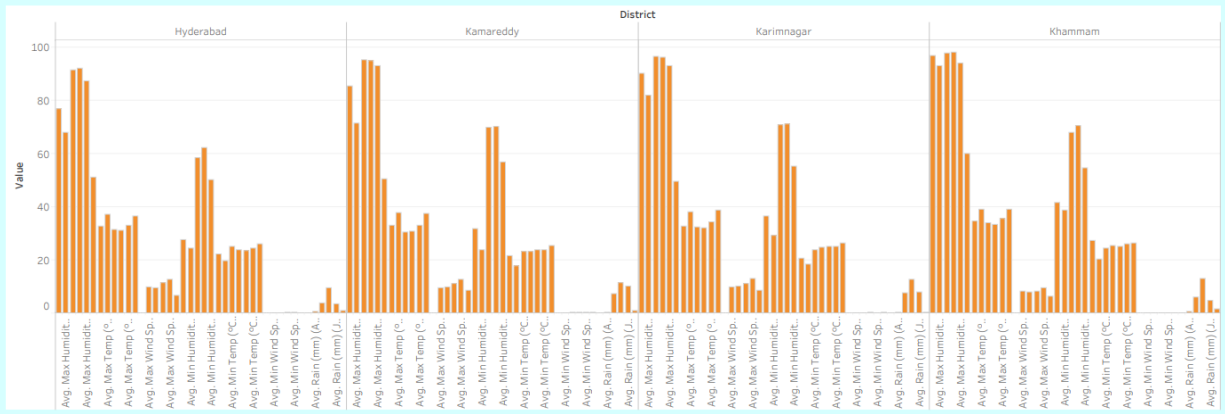
Average Humidity of different districts of Telangana across Jan-Aug



Average WindSpeed of different districts of Telangana across Jan-Aug



All factors influencing weather conditions of Telangana



POSTER

VISUAL ANALYTICS AND INSIGHTS INTO WEATHER OF TELANGANA

Completed By: S.Keerthana Pravallika,Kamaneeya Kadari,G. Chaitanya Deepti, D.V.S.Chandana

G. Narayanamma Institute of Technology and Science for Women

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- Is the abnormal rainfall due to changes in temperature and humidity and wind?
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DATA

The data regarding rainfall consisting of attributes such as:

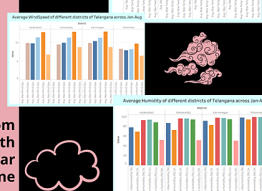
- district
- mandal
- date
- max temperature
- min temperature
- max humidity
- mini humidity
- rainfall in mm
- max wind speed
- min wind speed



have been used for analysis from the duration of the month January to August in the year 2021. The analysis has been done using Tableau.



RESULTS



CONCLUSIONS

- The maximum temperature is high in the month of April, May, and the least in July.
- Maximum Humidity is found to be more in the month of July and August, and least in May.
- Maximum wind speed is high in June, and least in April.
- Rainfall is usually found in the months of June, July, and August.
- These are found as usual but there are few outliers in the weather conditions, i.e., having rains abnormally.
- This is because of abnormal changes in temperatures as far as studied because the variables rain and max temperature are interdependent.
- Global Warming, Pollution, and deforestation are a few of the reasons for these abnormal climate conditions.
- Understanding the gravity of the situation and taking proper action, it may be planting more trees, and following eco-friendly practices is essential at the moment.



THEME

- SDG 13 Climate Action
- Agriculture is pivotal to the state of Telangana as it accounts for 16% of its industry. Due to rapid change in the climate this is causing there to be a disruption in the weather patterns.
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PROMPT

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REFERENCES

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