INDIAN CLIMATE ANALYSIS

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OBJECTIVE

To develop an interactive web-based tool that visualizes district-level climate data of India with weather analysis and passive design strategy evaluation to support climate responsive building design.

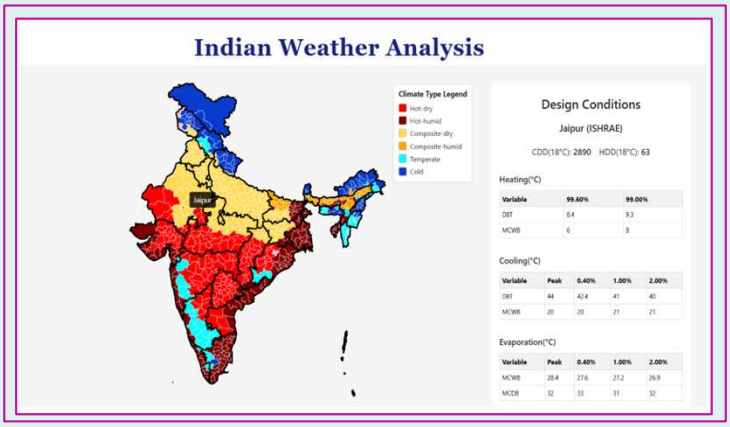

Fig.1. Climate classifications across India.

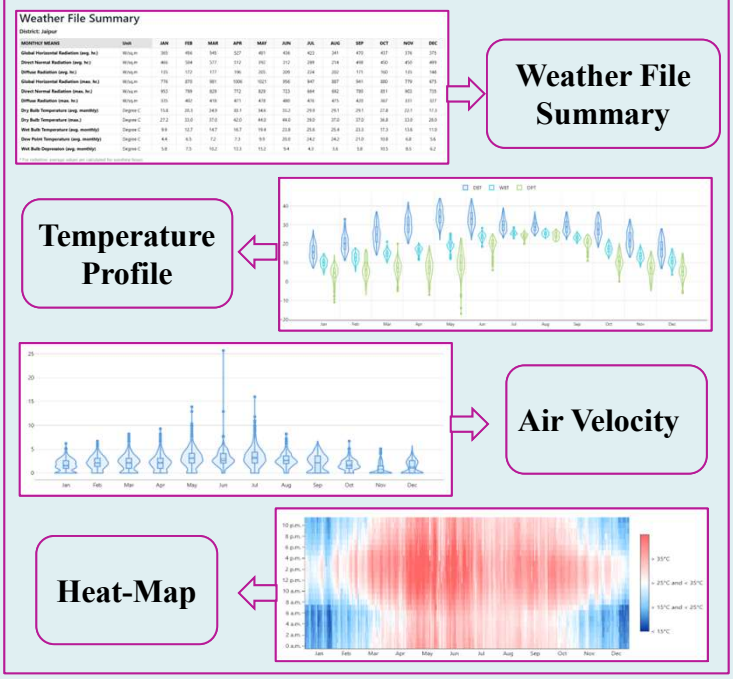

Fig. 2. Air temperature, radiation, wind, and more.

METHODOLOGY

1. Data Collection:
Gathered district-wise climate data from ISHRAE, ASHRAE, and COLBE.

2. Climate Zoning:
Classified districts into climate zones based on temperature and humidity.

3. Web Platform Development:
Built an interactive map-based platform with graphs, charts, and data downloads.

4. **Analysis & Visualisation:**
Enabled parametric weather trends, psychrometric chart analysis, and passive strategy overlays.

KEY FEATURES

1. Interactive Climate Visualisation:
District-wise graphs and psychrometric charts for weather analysis.

2. Passive Design Strategy Overlay:
Real-time overlays for optimizing comfort and energy efficiency.

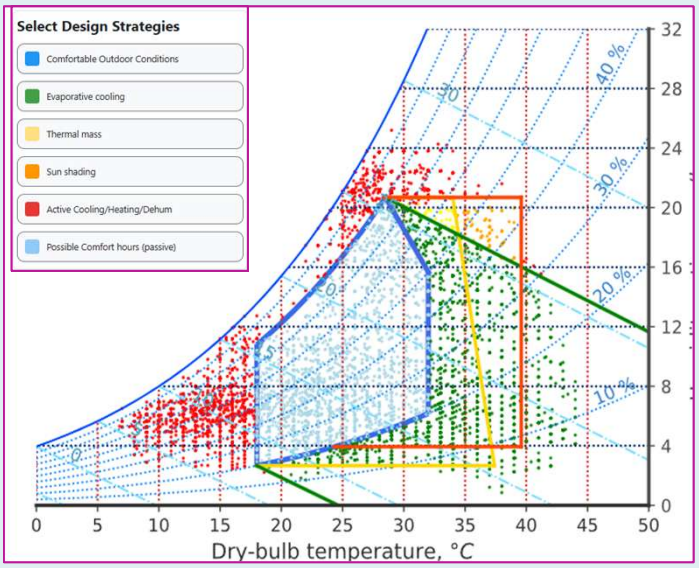

Fig 3. Psychrometric chart.

CONCLUSION

The tool enables easy access to district-wise climate data and visualizes passive design strategies, helping users make climate-responsive building decisions. It supports sustainable design by combining real data with interactive analysis.

Code URL :- https://github.com/Divyansh2992/IndianClimateAnalysis.git