SYNOPSIS

Weather ai – Smart Weather Forecasting

Weather ai is an innovative weather forecasting system that provides real-time weather information and future climate predictions for any location. The system collects essential data such as temperature, humidity, rainfall chances, and wind speed using a weather API. Unlike basic weather apps, Weather AI integrates simple AI techniques to offer smart suggestions, including precautions, travel safety tips, and recommendations based on weather conditions. This makes the system more accurate, helpful, and user-friendly.

Modules

1. User Interface Module

Designs the main screen where the user enters the city name and views weather details.

2. Location Search Module

Allows users to search and select any city or location.

3. Weather API Integration Module

Connects the system with the OpenWeatherMap API to collect real-time weather data.

4. Current Weather Display Module

Shows live temperature, humidity, wind speed, and weather conditions.

5. Forecast Module

Displays 5- day or 7- day weather predictions.

6. Data Processing Module

Processes raw API data and converts it into simple readable values.

7. AI Recommendation Module

Uses a basic AI model to give suggestions.

8. Trend Prediction Module

Uses simple machine learning to predict rising or falling temperature trends.

9. Alerts & Notifications Module

Shows warnings for heavy rain, storms, or excessive heat.

10. User Experience (UX) Module

Ensures clean UI, easy navigation, and fast loading for a smooth user experience.