WEATHERBUDDY

A calm look into tomorrow's sky.

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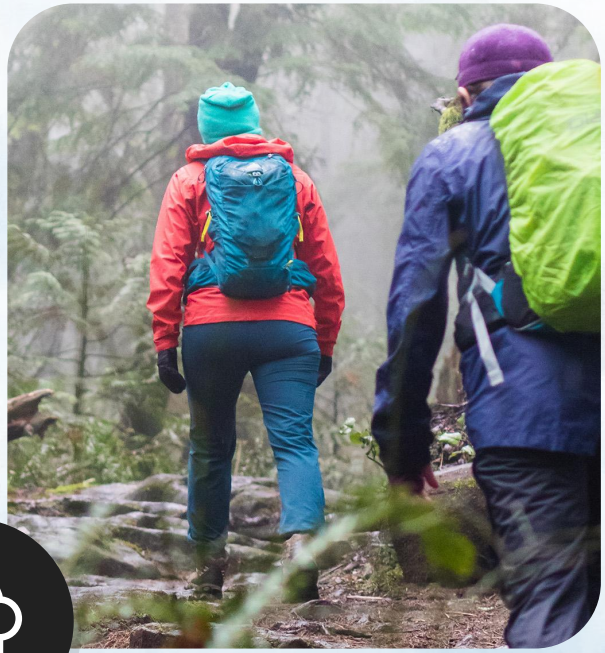
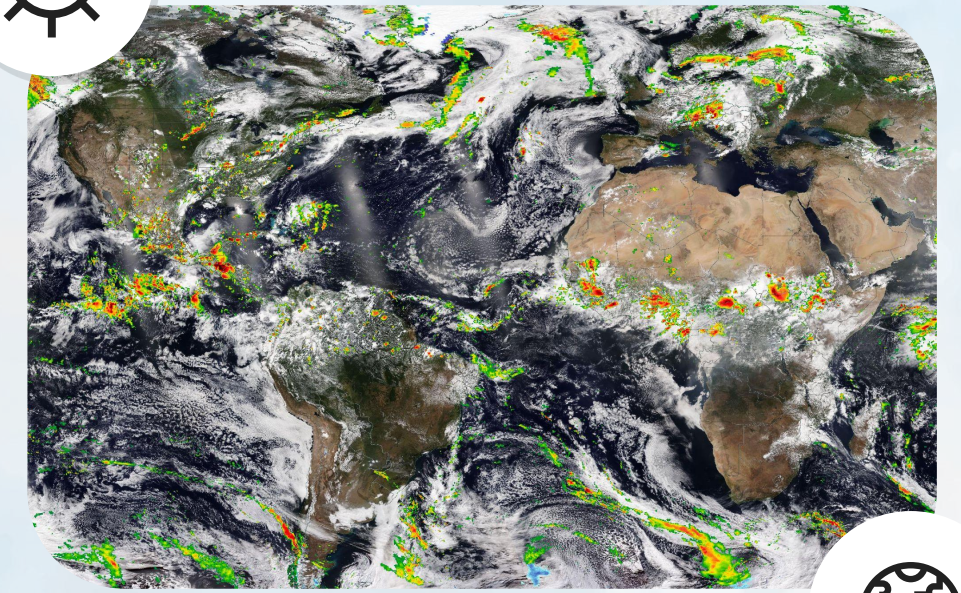
Knowing the weather is easy. Understanding it isn’t.

Planning outdoor activities often depends on luck. Traditional forecasts only predict a few days ahead not the likelihood of extreme conditions months in advance.

People need a way to know:

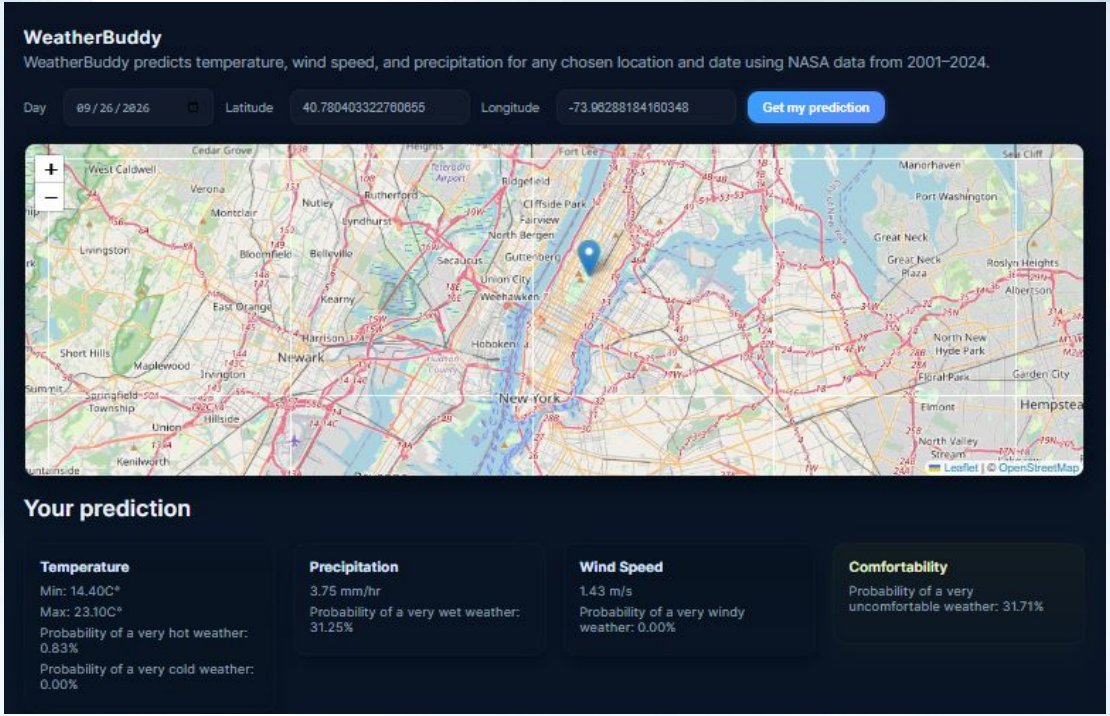
“What are the chances it’ll be too hot, too windy, or too wet for my plans?”





NASA’s decades of data tell a story.

NASA has collected over 20 years of global Earth observation data, including temperature, windspeed, rainfall, snow, and cloud cover.
This data can reveal the probabilities of certain weather patterns occurring at any place and time of the year.



Introducing WeatherBuddy

What is the purpose of the project?

The project addresses the NASA challenge **“Will It Rain On My Parade?”**

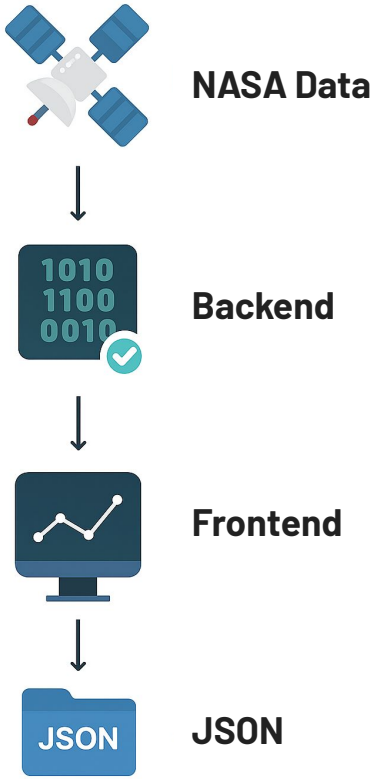
WeatherBuddy was created to help people understand the *probabilities* of uncomfortable or extreme weather conditions, not just short-term forecasts.

By using **NASA Earth Observation Data**, WeatherBuddy allows users to explore how likely it is for their chosen location and date to experience very hot, very cold, wet, or windy conditions.

The goal is to make climate data *personal and visual*, transforming decades of scientific data into insights that anyone can use to plan better and understand our planet’s patterns.

From NASA data to personal insights.

- User selects a location (map or coordinates) and a date
- System retrieves **NASA Earth Observation Data (2001–2024)**
- **Calculates probabilities for:** Temperature, Precipitation, Wind Speed ,Very Hot, Very Cold, Wet, Windy, and Comfort levels.
- **Displays results** as numbers + hourly graph
- Data can be exported as **JSON**



Future Improvements

More Environmental Metrics

Add UV index, and air quality to give users a more complete understanding of outdoor comfort and safety.

Text-Based Location Search

Allow users to type their city or country instead of finding it on the map, faster and more intuitive.

Personalized Weather Alerts

Let users set custom notifications like *"Alert me if rain chance > 70%."* Makes the experience more useful and engaging.