

Weather Website – Product Requirements Document (PRD)

1. Overview

This project is a personal weather website that displays real-time weather information based on the user's current location and searched cities. The goal is to build a clean, modern, and functional weather platform while learning full-stack development, API integration, and deployment.

2. Goals & Objectives

- Display real-time weather data
- Use current user location (GPS)
- Allow searching weather by city name
- Practice GitHub version control
- Secure API usage via server-side handling
- Prepare the project for deployment

3. Target Users

- Students learning web development
- General users checking daily weather
- Recruiters reviewing personal projects

4. Features Implemented (Current State)

- Current location weather
- Current temperature and condition
- Hourly forecast
- Humidity, wind, visibility, pressure
- Air Quality Index (AQI)
- Last updated timestamp
- Modern UI

5. Features Planned

- City search
- 7-day forecast
- Better error handling
- Deployment to Vercel

6. Tech Stack

Frontend: Next.js, React, TypeScript

Styling: Tailwind CSS

Backend: Next.js API Routes

API: OpenWeather

Version Control: Git & GitHub

7. Security

- API key stored in server environment variables
- API never exposed to client

8. Known Limitations

- Free API limits
- Daily forecast not fully implemented

9. Success Metrics

- Website loads without errors
- Weather updates correctly
- Secure API usage

10. Future Enhancements

- Dark mode
- Saved locations
- Weather alerts
- PWA support