BlueandCosmos - 20-Day Development Roadmap

Objective: Launch a working, demo-ready web platform for celestial & Earth intelligence using satellite data, AI scheduling, and live visualizations.

Week 1: Setup, Infrastructure, and Foundations (Days 1-5)

- Setup Repo & Deployment - GitHub, Vercel, Netlify
- Project Scaffolding - Next.js or React + FastAPI
- Map Base Layer - CesiumJS, Mapbox, Leaflet
- Kiro Integration - AWS Kiro SDK
- Celestial API Integration - NASA APIs, Skyfield, JPL Horizons

Week 2: Core Features & Scheduler Logic (Days 6-10)

- Event Detection Engine - Skyfield, PyEphem
- Earth Satellite Data - NASA FIRMS, NOAA, Copernicus
- Notification System - Firebase Cloud Messaging
- Event Database - PostgreSQL, Supabase
- Scheduler Logic - Cron/Celery/AWS EventBridge

Week 3: User Interaction & Intelligence (Days 11-15)

- Geolocation & Preferences - HTML5 Geolocation, LocalStorage
- Weather & Visibility Overlay - OpenWeatherMap, NOAA Satellite
- AI Integration (basic) - Python + simple classifier
- UI Polish - TailwindCSS, D3.js
- PWA Setup - Next-PWA or Vite PWA Plugin

Week 4: Finalization, Testing & Launch (Days 16-20)

- User Testing - BrowserStack, real devices
- Analytics & Logging - Plausible, LogRocket, or Sentry

- Documentation - Markdown, GitHub Wiki

- Demo Video & Pitch Deck - Loom, Canva

- Final Submission - GitHub, Kiro CLI

Optional Stretch Goals

- Real-time ISS tracker

- Smart celestial event recommendation engine

- Graph-based celestial network (GNN)

Deliverables Checklist

[ ] Web app deployed & responsive

[ ] Celestial & Earth event API integrated

[ ] Scheduler triggers events & notifications

[ ] Event DB live with sample records

[ ] Working `.kiro/` directory

[ ] GitHub README with description & usage

[ ] Demo video or slide deck