

How I Used Claude 3.7 and GitHub Copilot for this Project

1. **Writing Supabase Queries:** Leveraged Claude 3.7 to generate optimized Supabase queries for retrieving nearby resources using PostGIS functions, which were then implemented in the `resourceController.js`.
2. **Implementing Mock Social Media Logic:** Used Claude to design the `socialMediaService.js` with realistic mock data generation based on disaster tags and locations, making the simulation more believable.
3. **Supabase Caching Implementation:** GitHub Copilot helped create efficient caching mechanisms in `cache.js` model and across various services to reduce API calls and improve performance.
4. **Authentication Middleware:** Claude analysed security requirements and helped develop the JWT-based `auth.js` middleware, while Copilot assisted with role-based access control implementation.
5. **React Context Setup:** Used Copilot for scaffolding the `AuthContext.jsx` provider pattern, while Claude suggested improvements for token handling and secure state management.
6. **Geospatial Model Design:** Claude provided guidance on optimizing the disaster and resource models with proper PostGIS data types and indexes for spatial queries.
7. **Socket.IO Real-time Updates:** Leveraged both tools to implement the real-time notification system in the server's `index.js` and integrate it with resource creation events.
8. **External API Integration:** Used Copilot to generate the integration code for Mapbox geocoding in `geocodingService.js`, while Claude helped structure the error handling and response parsing.
9. **Image Verification Service:** Claude designed the AI-powered image verification system in `geminiService.js`, while Copilot helped implement the API calls and response processing for disaster image validation.
10. **Rate Limiting Implementation:** Used Claude to design the in-memory rate limiting solution in the server's `index.js` to protect against API abuse, while Copilot suggested optimizations.
11. **Protected Route Components:** Leveraged Copilot to generate the `ProtectedRoute.jsx` component with proper role-based access checks that integrate seamlessly with the authentication system.

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