

Colin Leahy

Lead Frontend Engineer · Forward deployed, Oahu, HI

Software engineer with over 10 years in production web and mobile apps, leading teams of 2 to 12 engineers. Deep in TypeScript and React. For the last three years I've been working on the WebGL map at the center of an Air Force command-and-control system (CBC2), built in TypeScript and deck.gl, where operators watch nearly 20,000 live air tracks at peak. Since April 2026 I've worked on site with those operators on Oahu.

EXPERIENCE

Hypergiant · Lead Frontend Engineer (forward deployed)

Jun 2023 – Present

Mission-critical apps for Navy, Air Force, Army and Space Force clients.

JERIC20 · CBC2 Air Force

Aug 2023 – Jul 2024, May 2025 – Present

Cloud command-and-control map for the Air Force. Battle managers use it to watch live air, sea and ground tracks and plan missions.

STACK Next.js, React, deck.gl, WebGL **STATE** Zustand, TanStack Query, Dexie

BACKEND GeoServer, Kinetica, PostgreSQL

- Work on site with Pacific Air Defense Sector operators at Wheeler Army Airfield. I sit in on live-fly exercises to watch JERIC20 in use, then join the debriefs to evaluate what went well and what needs improvement in mission-critical workflows.
- Turn warfighter feedback into clear, prioritized action items that the wider product and engineering teams scope into upcoming sprints.
- Built Vector Assist. An operator clicks a fighter, then a target, and the map draws the intercept course, meeting point and time to intercept, updating live as both aircraft move. It works anywhere on the globe and can pair several fighters at once.
- Moved track prediction onto the GPU, so thousands of aircraft glide smoothly between radar updates.
- Fixed a caching bug where one screen's partial track data overwrote another's, which made live tracks look lost and cleared active intercepts.
- Founded JERIC20's design system, then helped shape Hypergiant's open source Standard Toolkit (shared React components and map tools used across all programs) as part of its working group.

Proteus · Air Force cyber operations

Jul 2024 – Feb 2025

Mission planning and timing tool for Air Force cyber crews.

STACK React, Remix, MUI, Zod **STATE** Remix loaders, Jotai **BACKEND** Spring Boot (Java), PostgreSQL

- Led 3 frontend engineers with a partner company's API team through program closeout.
- Built the mission flow from first draft to two-person approval, plus timed alarms that alert crews when a mission goes live.
- Received the 2024 TACTIC award for the work.

NGC2 · Army command and control

Feb 2026 – Jun 2026

Next generation Army battlefield map with live video feeds, rebuilt on a new platform. On site at Schofield Barracks from April 2026.

STACK Next.js, React, deck.gl, Video.js **STATE** Zustand, TanStack Query **BACKEND** GeoServer, Kinetica, PostgreSQL

- Led 2 frontend engineers and owned live aircraft video end to end, including a secure streaming proxy.
- Made map rendering 3x faster by sorting map features in one pass instead of three.
- Helped run air-gapped Kubernetes deployments onto Army SBU-E (secure but unclassified, encrypted) computers on both SECRET and unclassified networks.

Carzilly · Co-owner & CTO

Feb 2026 – Present

Side company, run alongside Hypergiant. Used car marketplace for buyers and sellers, plus Trade-In Pro, a tool dealers use to appraise, share and bid on trade-ins.

STACK Next.js, React Native, Tailwind **STATE** TanStack Query, Zustand, nuqs
BACKEND Laravel, MySQL, Redis, Claude API

- Set product and technical direction as co-owner, and manage 4 offshore developers across the web, API and mobile apps.
- Lead Trade-In Pro, where dealers text a customer a link, see live wholesale values (Manheim MMR, VinAudit), and share the car with partner dealers to trade offers and messages.
- Run AI features on Claude Haiku that write listing descriptions, summarize listings for buyers and turn plain-language searches into filters.
- Cut paid API and AI costs with caching (AI summaries for 30 days, valuations for a day) and Redis rate limits.
- Closed security gaps with server-side ownership checks on trade-ins and prompt injection guards on AI inputs.

Horizon3.ai · Senior Software Engineer

Jul 2022 – Apr 2023

Autonomous penetration testing platform.

STACK React, TypeScript, TanStack, D3, Highcharts **STATE** Apollo Client **BACKEND** GraphQL, Python, AWS

- Built reusable virtualized TanStack tables and D3 and Highcharts charts, backed by Apollo caching, so customers could explore huge pentest results without lag.
- Restructured the frontend architecture to cut technical debt, moved the build to Vite, and mentored junior engineers.

Thrive TRM · Senior Frontend Engineer

Nov 2021 – Jul 2022

Recruiting software for executive search firms.

STACK React, TypeScript, Jest **STATE** Redux, RTK Query **BACKEND** Rails REST API, AWS

- Helped the CTO move the product from Rails to React, and cut test runtime by about 70%.
- Fixed stale data across screens by moving cache invalidation to Redux tags.

Goldman Sachs · Staff Software Engineer & Technical Team Lead

May 2018 – Nov 2021

Financial planning apps for advisors and their clients. Joined through the United Capital acquisition.

STACK React, TypeScript **STATE** Redux **BACKEND** Node.js, GraphQL, AWS

- Architected the two apps behind United Capital's new client platform, then led a team of 12 after the acquisition, including hiring.
- Moved the client app onto the Goldman Sachs design system, led its refactor to React hooks, and ran the QA team's Cypress end-to-end testing.
- Exceptional Contributor Award (2020), given to one person in the company each year.

Earlier: web roles at Insubuy, TNT Dental and Mauri Pro Sailing (2015 – 2018). Self-taught, after running a skateboard brand and freelancing as a graphic designer.

PROJECTS

visimo · My own GPU music visualizer, open source. WebGPU, WebGL2, TypeScript · github.com/LeahyCC/visimo

Kungfu Kanban · Open source board that runs AI coding agents and reviews their work before merge. Node, Claude Code · kungfu-kanban.com

bouldi · Climbing trip planner with live wind and radar maps. Next.js, MapLibre, Canvas, Expo · bouldi.app

ACE · Volunteer app for Eldorado Canyon climbing hardware requests, with a review and approval flow. Next.js · aceeldo.org

SKILLS & EDUCATION

Frontend	TypeScript, React, Next.js, React Native, Remix, Tailwind
Graphics & maps	WebGL, WebGPU, deck.gl, Canvas, D3, Highcharts, MapLibre, Mapbox
Performance	Virtualization, memoization, Web Workers, code splitting
Data & testing	Zod, OpenAPI, TanStack Query, Zustand, Vitest, Playwright
Delivery & AI	Turborepo, GitLab CI, Docker, Kubernetes, Claude Code, MCP
Education	Collin College, graphic and interface design coursework (2014) · English (native), Spanish (B1)