Thomas R. Hallock

Oak Park, IL (Chicago) · relocating to New Zealand in 2027 · hallock@gmail.com · github.com/antialias

I've shipped web software for twenty years, from cloud infrastructure to the apps people use. At EvolutionIQ I rewrote the web platform claims adjusters use on top of the company's AI model; CCC later bought the company for $730M. At Compass I led a team and brought GraphQL into production. Since 2025 I've built the platform AI coding agents run on (model routing, sandboxed cloud sessions, MCP servers) and shipped apps, games and devices with it.

EXPERIENCE

Independent software engineer, Oak Park, IL — 2025 – present

AGENT PLATFORM

- **Apiary (open source).** A gateway for pooling personal Claude accounts and GPU capacity among members. It routes every coding agent by capability tier across Claude, OpenAI, Kimi and local models, with failover, quota tracking and a web console. Go, Python and Next.js; 5,000+ tests; deployed by CI on every push.
- **Cloud agent platform.** Sandboxed Claude Code containers on my servers: capability-based permission profiles, admission control, an OAuth-protected MCP API so agents can launch agents, and live laptop-to-cloud hand-off.
- **Email agent.** Gives every incoming email its own Claude run. It stays consistent by recalling how similar mail was handled, learns from my corrections, and can only draft and archive, never send or delete. 3,500+ tests.
- **engage.** An open-letter platform with verified signatures. Scheduled agents write its news feed and design its print flyers, publishing only through narrow, checked APIs hardened against prompt injection.
- **Platform as code.** Terraform and Ansible for a k3s cluster, a CI server, DNS for seven domains and the network; Woodpecker CI with health-gated deploys and rollback; Prometheus and Grafana.

APPS & GAMES

- **Violin practice system.** Real-time pitch tracking in the browser, live score following on printed music, and sheet music read from photos by two independent vision models checked against each other. Native iOS app with Watch, Live Activities and CarPlay. 15,000+ tests.
- **Ouija FPV.** A multiplayer WebXR world on Quest 3, laptop and phone, with physics, voice chat, speaking characters and procedural worlds, held to 72 FPS on the headset by automated device benches. 8,000+ tests.
- **Mesmer.** Reverse-engineered a force-feedback yoke's CANopen motor controllers and released an X-Plane plugin (C++) that computes yoke forces from the flight model. Also an AI air traffic controller with realtime voice.
- **Woodworking.** Parametric OpenSCAD models compile to a 3D and Quest AR viewer, drawings and cut lists, checked against a shop inventory that AI agents use through an MCP server with versioned, audited writes.
- **Abaci.one.** An abacus learning platform with multiplayer games, a camera that reads a real abacus (TensorFlow.js), and a designer for 3D-printable abaci, on a k3s cluster I run.
- **Skills tracker.** Maps practice onto every Common Core math standard and generates printable worksheets; an agent grades scanned work into reviewable pull requests.

HARDWARE

- **E-paper photo frames.** ESP32-S3 firmware with rollback-safe OTA updates, pixel-exact previews from a WASM dithering engine, and a browser tool that generates 3D-printable enclosures with manufacturability checks.
- **Tidepool.** Memory-constrained ESP32 firmware for e-paper devices, including an e-book reader that also compiles to WebAssembly, and WiFi-only location in 520 KB of RAM.
- **3D printer control.** An IPP-style print API, a camera DVR, an AI check that the bed is clear, and a simulated printer fleet that speaks the real protocols.
- **Haywire.** An iOS OBD-II logger for an intermittent electrical fault; a hardened adapter driver and a fault-injecting simulator.

Also: a speech-emotion model distilled to 2.2M parameters for the browser; a three.js shadow-map bug found and reported, fixed upstream in #34687; a Claude Gmail connector bug reported (anthropics/claude-ai-mcp#421); an open-source Claude Code design plugin; photo-to-citation, a civic app for Oak Park.

Career break for family — Oct 2022 – 2024

EvolutionIQ, New York (remote) · *Senior Full-Stack Engineer* Apr 2021 – Sep 2022

AI claims guidance for insurers. A model reads adjusters' and medical staff's notes and flags the injury and liability claims that need attention. CCC Intelligent Solutions bought the company for $730M (announced Dec 2024).

- Rewrote and modernized the company's entire web stack in Node, React, TypeScript and Material UI: the platform adjusters use to work the claims the model flags.
- Built prototypes for new product directions.
- Onboarded most of the web team.
- Worked across Python services, PostgreSQL, Kubernetes on Google Cloud and the deployment infrastructure.

Compass, Seattle · *Senior Software Engineer II (IC4)* May 2019 – Mar 2020

- Engineering lead for a team of four that built, from scratch, the web apps agents use to produce comparative market analysis reports (React, Koa, GraphQL, Redis).
- Built the company's first production GraphQL service; five teams followed with the patterns I showed them.
- Built a self-serve app that let any team deploy to EKS (Kubernetes) at any time, replacing cron and EC2 releases.
- Built a tool that let stakeholders raise PagerDuty and OpsGenie incidents for production failures.
- Cut company-wide logging volume by two-thirds with wasteful-logging detection I developed and documented.
- Onboarded about 20 new hires in the new Seattle office.

Providence Health & Services, Digital Innovation Group, Seattle · *Senior Software Engineer* 2017 – 2019

- On a five-person team, built a universal React app for booking clinic appointments and nurse-practitioner video visits.
- Designed and built a feature that lets patients photograph their insurance card and have it read by OCR.
- Argued for gradual, feature-flagged rollouts and wrote their Redux adapter; all new Providence features ship this way.
- Created an internationalization approach for React adopted across the organization, and introduced package-based development so teams could reuse each other's work.

1stdibs, New York · *Senior Front-End Engineer* 2014 – 2016

- Created and launched MessageCenter, the messaging and commerce system between buyers and dealers.
- Brought in git best practices, behaviour-driven tests, front-end coverage reports and a component-based front end.

LearningPod (The Washington Post Company) · *Senior Front-End Developer* 2012 – 2013

- Built a rich-text editor for authoring math (contenteditable, MathJax, Groovy/Grails), plus WebDriver test suites.

Roubini Global Economics · *Senior Web Application Developer* 2010 – 2012

- Wrote a long-lived forum and internal ExtJS apps; launched EconoMonitor (WordPress Multisite); release manager.

Earlier: web developer at Black Enterprise; support manager at Versata/FordDirect; systems administrator at Medicus Insurance; founder of The Sellery, an eBay consignment business with its own software, 2004–2011.

SKILLS

- **Languages:** TypeScript/JavaScript, Python, Go, Swift, C++ (ESP32 firmware, X-Plane plugins), SQL, Bash
- **Front end:** React, Next.js, Material UI, Redux, GraphQL (Apollo, Relay), three.js/WebGL, WebXR, Web Audio
- **Back end:** Node (Koa, Express), GraphQL, PostgreSQL, SQLite, Redis, Drizzle, Socket.IO, WebRTC
- **Infrastructure:** Kubernetes (EKS, k3s), Docker, Terraform, Ansible, Google Cloud, AWS, CI (Woodpecker, GitHub Actions, Jenkins), Prometheus, Grafana, Datadog, PagerDuty
- **AI:** Claude Code (plugins, skills, hooks, headless runs), MCP servers, Anthropic Messages API, OpenAI Realtime, LLM routing and failover, Model distillation (ONNX)
- **Apple and hardware:** iOS, watchOS and CarPlay apps, ESP32-S3, CANopen, OBD-II, OpenSCAD

OPEN SOURCE

npm-build-cache (a shared module cache for faster rebuilds), mimic-webpack, and over 20 other published packages; contributions to npm, Jest and react-toolbox. Recently: Apiary, Mesmer and a Claude Code design plugin.

EDUCATION AND SERVICE

- **B.S. Computer Science**, University of Texas at Austin
- **TEALS** volunteer teacher, AP Computer Science, at a New York City public high school, 2014–2015