Zane Roman Cooke

I build what a company runs on.

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STACK

LANGUAGES / FRAMEWORKS:
TypeScript · Next.js · React · React Native · Node · Python · SQL/Postgres (Neon, Supabase; Prisma, Drizzle; PostGIS) · C/C++ (ESP32) · OpenSCAD

AI AND AGENTS:
Anthropic API · Claude Code as the primary build instrument (skills, hooks, multi-session) · MCP — author of an audited read-only gateway; consumer of a dozen connectors · agent platforms on dedicated hardware · eval discipline: measure before trusting

PLATFORM:
Vercel · Railway · Linux VPS · Modal · Clerk / Better Auth · Resend · Slack Bolt

DOMAINS:
medicine and biomedical engineering (regulated devices, EU MDR) · nonprofit formation and compliance · clean food and regenerative agriculture · operations · startup operations · venture-studio and fund operations (incubation, SPV and fund-ops mechanics)

EDUCATION

University of Connecticut — M.S. Biomedical Engineering, 2019 · B.S. Biomedical Engineering, 2018

SELECTED ACTIVITIES

Circuit of the Americas motorsports medical internship (Dell Med, 2021–2023) — trackside first responder for 30+ races alongside Formula 1, MotoGP, and NASCAR medical crews.

Austin City Chair, Lone Star Survival tourniquet training (2022–2024) — quarterly events that trained 400+ community members in bleeding control; managed 20+ volunteer instructors.

SUMMARY

Zero-to-one operator and builder across medicine, nonprofits, food systems, and venture funds. I build what a company runs on — full-stack apps, agentic systems, automations, custom integrations fitted to existing workflows, legal and compliance structure, teams, and the runbooks around them — and document it so it outlasts me. At a venture studio this year that meant ten production applications, a 29-module platform running both the fund and the incubations, a nonprofit and its for-profit arm stood up and kept in good standing, and the agent infrastructure a four-person team runs twenty-plus projects on. Before that: biomedical engineer leading EU MDR remediation at Cardinal Health, Medtronic, and Mozarc Medical; EMT through COVID; provided medical services for Formula 1 and MotoGP; attended Dell Medical School at the University of Texas at Austin; co-founder of a company that reached cash-flow positive in twelve months. Self-taught in software and hardware; production-proven, not credentialed — and honest about it. Independent work: zaneromancooke.com, 29 documented builds.

EXPERIENCE

Ultranative — Head of Operations & Innovation

Austin, TX · Jan 2026 → present

Venture studio and incubator. Own the zero-to-one execution layer across the studio's incubations: founder ideas → processes, software, and early teams, across every incubation at once.

- Built and shipped **ten production applications in a quarter** (~860 commits across 14 repos, Jun–Aug 2026), including two internal operations platforms that became the template every later dashboard copies — one for a clean-food certification nonprofit, one **29-module** studio platform.
- Led delivery of the 29-module studio platform (scope, stakeholder acceptance, measurement, handoff) with an engineer owning the build.
- Designed and run the studio's **AI-native operating layer**: an audited read-only data gateway, Slack-reachable agents on dedicated hardware, scheduled jobs and alerts, per-company knowledge bases, and the context / skill / memory system that lets AI coding sessions work across 20+ projects without re-briefing (12+ custom skills; 17 concurrent sessions).
- Built a **corporate-card reconciliation engine** on that gateway, measured at **90–98% precision** against the reconciled books, surfacing corrections along the way. Inherited at a contractor handoff, rebuilt, and handed off with a runbook.
- Own the operational and software layer of the certification nonprofit: audit operations with a partner-facing portal, the certification pipeline, grant discovery and deadline tracking, CRM, media intelligence, branded document generation.

- Authored three **federal grant applications** for public school districts (HHS DEPEND, **up to $2.5M**): learned the program's structure, goals, and scoring end to end, designed each district's plan around its budget, existing initiatives, and constraints (e.g. a reusable-serviceware swap paid for by its own avoided disposables spend), and wrote the full package: narrative, budgets, milestones, evaluation design, letters of commitment.
- Built and operate the **iPad kiosk system for a school food-service pilot** — menu and allergen display, diner survey, waste and throughput logging, staff hours, food-safety temperature records, a lobby display — six surfaces a kitchen runs on every weekday, with an availability runbook.
- Deal and portfolio analysis: a valuation engine and projection model, a carry-waterfall model across late-stage vehicles, a market/monetization model for an early AI-consultancy concept, contract redlines.
- Coordinated legal filings, registrations, and nonprofit status for a new certification nonprofit and its for-profit arm with outside counsel: IRS Form 1023, fiscal sponsorship, certification mark, SAM.gov/UEI, state registrations, wholesale licensing, insurance, tax setup, and the ongoing filings that keep them in good standing.
- Stood up hiring and people operations from nothing; acted as chief of staff to the CEO (AI-generated pre-meeting briefs, a "needs-you" queue, batch decision handoffs); wrote the studio's security training and ran its password-manager rollout; cut software spend through recurring audits.
- Measured the seat instead of estimating it: a six-source workload audit (calendar, 135 recorded meetings, mail, Slack, 867 build-session transcripts, ~860 commits; overlaps merged) — sixteen distinct functions, nine outside the original charter.

Akture — Co-Founder & COO

`May 2024 → present`

Action-capture video and livestreaming for recreational sports facilities.

- Conceived, developed, and brought the Akture system to market; ran everything that wasn't the camera firmware — logistics, legal, HR, R&D coordination with international technical partners, accounting — from idea to launch.
- MVP delivered in **six months**; **cash-flow positive in twelve**, on targeted site sales and cost-efficient scaling rather than a raise.

Mozarc Medical — R&D Engineer (remote)

`Feb 2024 → Jul 2025`

- Supported cross-functional Renal Care Solutions remediation (>$270MM annually) across international engineering teams; test protocols, design-history documentation, and regulatory submissions.

Dell Medical School, The University of Texas at Austin — MD program

`Austin, TX · 2021 → 2024`

- Completed preclinical coursework and all core clerkships, with rotations across most major specialties; withdrew after a spine injury.

Medtronic — R&D Engineer

`Mansfield, MA · Dec 2020 → Jun 2021`

- Independently led Renal Care Solutions engineering for EU MDR remediation (~$300MM annual revenue): hazardous substances, functional testing, stability, biocompatibility; led Regulatory, Quality, Packaging, and R&D in bringing Design History Files to EU MDR standard.

Fallon Ambulance Service — Emergency Medical Technician

`Boston, MA · Feb 2020 → May 2021`

- Emergency care and transport for 500+ patients during the COVID-19 pandemic, alongside physicians and nurses in high-acuity conditions.

Cardinal Health — R&D Engineer

`Mansfield, MA · Jul 2019 → Oct 2020`

- Directed remediation of a $252MM product portfolio to EU MDD/MDR compliance — verification, stability, controlled documentation — coordinating Quality, Regulatory, Clinical Affairs, Manufacturing, and R&D across five countries.