

Cole P. Tebou

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SUMMARY

Engineer shipping production AI systems, developer tooling, and full-stack web apps. Currently a civil/structural engineer at X-Energy who has independently delivered two internal client/server engineering applications, a cross-program GitLab analytics platform, and meaningful contributions to the APEX repo on the XEAI team. Independently operate a multi-tenant AI agent platform (chat.badland.ai, agent.badland.ai) on a stack that mirrors APEX (TypeScript, React, Vite, Express, MongoDB, AWS). 10+ PRs merged into OpenClaw and Langfuse in the past month. Equally comfortable owning a system end-to-end as managing a 20-person field crew on a \$100M build.

EXPERIENCE

X-Energy · Civil / Structural Engineer

Nov 2024 – Present · Rockville, MD

- **Excalibur** · Designed and shipped an automated reinforced-concrete design tool for XE-100 nuclear structures. Ingests finite-element shell forces from any FEA platform (SAP2000, Staad.Pro, ANSYS) through a standardized 8-parameter interface and outputs ACI 349 / ACI 318 compliant reinforcement designs, replacing manual MathCAD workflows. React + FastAPI with SSE streaming, drag-and-drop file ingest, 800+ test suite, full GitLab CI with coverage gates. Cleanly packaged for Windows / macOS / Linux with one-click launchers, automatic venv + frontend builds on first run, and zero-admin per-user installs so engineers can start using it without IT involvement. Sole developer.
- **Excito** · Built a unified seismic analysis toolkit for earthquake ground-motion workflows, modernizing a legacy Fortran 77 codebase (RSPMatch / Abrahamson 1993, Al Atik 2009) into a portable, scriptable CLI with planned site-response, ground-motion selection, and hazard-disaggregation modules. Wraps gfortran-compiled time-domain spectral matching with a clean Python interface and integrates with the pyStrata / Strata equivalent-linear pipeline.
- **GitLab analytics platform** · Built an executive Power BI dashboard backed by a custom Python ETL service that hits the GitLab API to pull issues, MR metrics, pipeline status, and velocity across nearly every engineering group at the company. Surfaced cross-team blockers and program-level throughput patterns previously invisible to leadership.
- **P6 → GitLab issue ingestion** · Sole-author of the script that ports every Primavera P6 activity into GitLab as 1:1 issues with linked hierarchy, schedule metadata, and status sync. Developed during a cross-functional GitLab Wolfpack and adopted as the canonical bridge between project-controls schedules and engineering execution.
- **NucS GitLab administration** · Own permissions, runners, branch protection, CI templates, and custom webhook automations across the entire NucS group (e.g., GitLab issue mentions auto-DM the tagged user in Microsoft Teams).
- **APEX repo** · Active contributor on the XEAI team while formally seated on civil/structural. Work spans new internal apps, chat-streaming and cancellation reliability, shared backend auth middleware, content-handling fixes, and migration robustness. Authored internal Claude Code skills and prompts now reused across the team.

Badland · Founder & Independent Developer

2024 – Present

- **chat.badland.ai** · Self-hosted multi-tenant AI chat platform on a stack that closely mirrors apex: TypeScript, React, Vite, Express 5, MongoDB, npm workspaces, AWS Bedrock-backed inference. Production for over a year with paying tenants.
- **agent.badland.ai (OpenClaw)** · Multi-tenant AI agent platform with auto-provisioner that spins up a new isolated tenant on signup and texts the user via iMessage or SMS (auto-detected by carrier) within seconds.
- **Open-source contributions** · 10+ PRs merged into **OpenClaw** and **Langfuse** in the last month covering channel extensions, observability, and developer tooling.
- **AWS infrastructure** · Own AWS account with IAM roles, multiple EC2 instances, Route 53, CloudWatch alarms, and Bedrock inference profiles powering both the chat website and Claude Code sessions.
- **Cloudflare** · Workers, DNS, security rules, and custom email routing chained with Amazon SES and Resend across 10+ domains.
- **Sunny Dayz e-commerce** (sunnydayz.co) · Admin dashboard that auto-imports products from AliExpress, applies margin rules, generates ad copy, product photos, and website copy via LLM and image models, and ships to a Stripe-integrated storefront.
- **ai-cli** · Rust CLI that fans a query to multiple LLM providers in parallel and renders side-by-side responses in CLI or TUI mode.
- **Voice agent** · Raspberry Pi wake-word model that triggers OpenAI Realtime, Gemini Live, or Grok voice APIs for full-duplex conversation, backed by the Badland API.

- **Native Badland clients** · Chrome extension with inline LLM actions, native macOS menubar app with global hotkeys, and a mobile web terminal (full Ctrl/Alt/Esc/arrows keyboard) for pasting images straight into EC2-hosted Claude Code sessions from a phone. All authenticate against the same Badland API.
- **Book Club** · Collaborative ebook + audiobook web app: shared R2-hosted file, real-time per-reader progress bar, and gated tapback reactions that unlock as each reader catches up (spoiler-free).
- **Other shipped sites** · macros.org, starheart.ai, jamesbsolutions.com, hoa-kit.com, nebulatio.com (web design studio).
- **Dotfiles + agent runtime** · Bidirectional sync across roughly 10 machines and 3 OSES (macOS, Ubuntu, iOS); custom zsh + tmux + Starship, hundreds of aliases, shell functions, Claude Code skills, tmux-pane-scraping agent workflows, and a memory-sync layer that reconciles OpenClaw long-term memory with Claude Code project memory so agents on different machines share context.
- **Production hardening** · OpenTelemetry traces to Langfuse, Sentry, UptimeRobot, full GitHub Actions / GitLab CI (test, build, container publish, EC2 / Vercel deploy with secret management), and Twilio / iMessage (BlueBubbles) bots for conversational flows, reminders, and status alerts.

Jun 2021 – Nov 2024 · FL / SC

Kiewit Infrastructure · Project Engineer

- **Earned Value Management** · Roughly half of the role across all four projects: maintained cost-loaded P6 schedules, reported BCWS / BCWP / ACWP and CPI / SPI to client and corporate, drove monthly variance analyses against the performance-measurement baseline, and built quantity-tracking workflows that fed directly into earned-value rollups. Same EVM discipline now becoming a focus area at X-Energy.
- **BAE Jacksonville Ship-Lift Drydock (\$100M)** · Managed installation of 6M lbs of rebar; delivered 3 months ahead of schedule, saved \$600k in escalation costs, cut waste from 10% budgeted to under 1% (total savings over \$1M); led crew of 20 ironworkers.
- **Railroad Ave Extension (\$30M, Charleston SC)** · 180-ft bridge plus 2 miles of new road; ran QA inspections, procurement, and pile-driving / PDA analysis coordination.
- **CHS Airfield Repairs (\$13M)** · Full-depth concrete slab replacement at Charleston International; ran shift turnover and 100+ slab layouts.
- **Enviva Epes Industrial (\$250M EPC)** · Constructability feedback during design; work plans for 500+ foundations.

SKILLS

Languages	TypeScript, Python, Rust, JavaScript, Bash/Zsh, C/C++, Java, Fortran, MATLAB
Frontend	React, Next.js, Astro, Vite, Tailwind, shadcn/ui, Radix, Vercel AI SDK
Backend	Node, Bun, Express 5, tRPC, FastAPI, Hono
Data	PostgreSQL, MongoDB (Atlas + self-hosted), Supabase, SQLite, R2/S3
AI / LLM	Claude Code, AWS Bedrock, OpenAI / Anthropic / Gemini / Grok / xAI APIs, Vercel AI Gateway, Langfuse, agentic frameworks, prompt and skill design
Cloud / Infra	AWS (EC2, Bedrock, IAM, Route 53, CloudWatch, SES, CLI), Cloudflare (Workers, DNS, Email Routing), Vercel, Tailscale, Nginx, Caddy, Docker, systemd
DevOps	GitLab and GitHub Actions CI/CD, OpenTelemetry, Sentry, UptimeRobot, GitLab webhooks and runners, Jira, Confluence
Engineering	FEA (SAP2000, Staad.Pro, ANSYS), ACI 349 / 318 reinforcement design, RSPMatch / pyStrata, EVM (BCWS / BCWP / ACWP, CPI / SPI), Primavera P6, Power BI, AutoCAD, GIS
Tools	tmux, Starship, comprehensive dotfiles, Excel, M.S. Office

EDUCATION & CREDENTIALS

Clemson University · B.S. Civil Engineering, Aug 2017 – May 2021 · **Eagle Scout** · **EIT** (Civil FE passed) · **LEED Green Associate**