Derek Hearst

Lead Full-Stack Developer

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Summary

Lead web developer at Brown & Root Industrial Services, a 10,000-employee industrial contractor. Built and support five production apps from scratch, including an employee portal used by 2,500+ employees a month and the data API behind every internal app. Work directly with business owners in HR, Payroll, Safety, Procurement, Finance and Project Controls, and run delivery end to end, from requirements through release and support. Experienced in replacing legacy systems and in AI-assisted development with Claude Code and MCP.

Experience

Brown & Root Industrial Services

Lead Web Developer Jan 2025 – Present

- Built the company's largest internal app (about 185,000 lines), a workforce and safety platform used daily at job sites: timekeeping to replace the legacy payroll system, safety management, certifications, about 135 SQL-driven reports, and client reporting for Shell, Lubrizol, Celanese and CF Industries.
- Turned hard-coded payroll rules into a rules engine: 69 rules and about 10,000 configurations across 250+ business units, scoped by unit, pay type, employee type and date. Authorized users change rules in an audited grid, so rule changes no longer need a code deploy.
- Wrote 125 parity scripts against the legacy payroll system that caught overtime and per diem pay defects before cutover.
- Created the central data API that supplies employee, business unit, cost code, pay type and work order data from JD Edwards ERP and Microsoft Fabric to every internal app. It handles 250,000+ requests a month, and apps call it through a typed npm client.
- Replaced manual invoice backup assembly with a generator that pulls each JD Edwards invoice's AP files from the archive and merges them into one PDF in the client's print order.
- Moved legacy console jobs to Temporal workflows, including the Puerto Rico 401(k) bank file, drug-screen rosters and outbound benefits files, clearing 16,904 exceptions in one feed.
- Built the AI development platform used company-wide: a 191-doc knowledge base and Claude Code plugin with skills, hooks and MCP servers, one of which queries the data warehouse as the signed-in user. Wrote the AI guardrails, including adversarial review of AI-written code.
- Top contributor on every app built, with about 5,250 commits across 18 repositories. Monthly output tripled after adopting Claude Code in spring 2026, from about 200 commits to about 670, with tests and review still required on every change.
- Modernized delivery: moved 11 apps from Azure DevOps to GitHub Actions with signed container images, required tests with every feature and fix (1,000+ on timekeeping alone), gated every push on four CI suites, and made every schema change a reviewed migration.
- Rolled out Sentry error and usage monitoring across all apps, with PII scrubbing.
- Built a job-site safety kiosk where workers log safety engagements in English or Spanish, and AI cleans up, translates, redacts and categorizes each entry.
- Supported two acquisitions: stood up EthosEnergy's safety platform in the company's tenant, scoped a 24-module migration of its systems, and built SWAT's reverse-billing checker.
- Sole author of SimpleSvelte, a UI component library with 141 npm releases used by 6 apps.

Full-Stack Web Developer Feb 2023 – Jan 2025

- Built the employee self-service portal from scratch, now used by 2,500+ employees a month for card and reimbursement requests, mobile device requests, IT scheduling and safety forms.
- Built a procurement and equipment management system: vendor records with insurance and MSA tracking, RFQs with bid import, estimates uploaded to JD Edwards, equipment rentals with rates, budgets and POs, and a daily automated rate roll-forward.
- Launched the field operations platform with billing tools, including a reverse-billing check that compares client billing files with JD Edwards time, person by person and day by day.

Software Engineer, *HP* Aug 2021 – Aug 2022

- Built C# (.NET 6, WPF) printer test and automation software that talked to printers over Telnet, serial, HP Jetdirect and IPP, automated firmware updates and captured logs.
- Led specification meetings for upcoming printers, set new standards for spec documents, and supported beta customers by email and on site.

Selected Projects

The Merrow Deep, *co-op VR submarine game* In development

- A 1–4 player co-op VR game in Godot 4 for PCVR: host-run tactical simulation, sonar and noise modeling, and crew-versus-crew play where each team sees only its own sensors. About 2,400 commits since September 2026, mostly written with Claude agents.

FoundryAI, *AI game-master assistant for Foundry VTT* github.com/derekhearst/FoundryAI

- Open-source module: streaming chat, retrieval over the game world from a client-side vector store, 40+ AI tools (tokens, combat, dice, audio), NPC roleplay and session recaps.

eFoil, *homebuilt electric hydrofoil* derekhearst.com/#efoil

- Built a riding eFoil with hand tools: shaped and glassed the board, welded a 2.3 kWh pack, and tuned the VESC from ride logs. V2 is a parametric Blender model that draws its own CNC plans.

Skills

Languages: TypeScript, JavaScript, SQL, C#, GDScript, Python
Frameworks: SvelteKit, Svelte, Node.js, Bun, Express, ASP.NET, Vue
Data: PostgreSQL, SQL Server, Prisma, Drizzle, Redis, JD Edwards, Microsoft Fabric, Dynamics CRM
Cloud and DevOps: Azure, Entra ID, AI Foundry, Docker, GitHub Actions, Temporal, Sentry
Testing: Playwright, Bun test, unit, rules and integration suites, CI quality gates
AI: Claude Code, MCP servers, OpenAI, RAG and pgvector, AI-assisted development
Game development: Godot 4, OpenXR (PCVR), multiplayer networking, Blender
UI: Tailwind CSS, DaisyUI, AG Grid, English/Spanish i18n, accessibility, responsive design

Education

Full-Stack Web Development Certificate, *Boise CodeWorks* Aug 2022 – Feb 2023
Earned the “Golden Duck” award for a perfect score on every assignment.

Computer Science coursework, *Boise State University* Oct 2021 – Jun 2022

Computer Science coursework, *University of Nevada, Reno* Aug 2018 – May 2019