DAVID P. GRAVES

Medford, MA · (978) 404-9208 · david.p.graves@gmail.com
david-graves.com · github.com/gravesisme · linkedin.com/in/dagraves

PRINCIPAL SOFTWARE ENGINEER

Principal software engineer with 20 years of experience building customer-facing applications, specializing in frontend architecture and technical leadership. Created Signify's IoT Portal and led its evolution for eight years, growing the engineering team from one to four. Most recently led frontend architecture and UX for AI applications, including human review workflows and interactive conversational interfaces. Deep experience in TypeScript, React, complex web and native mobile applications, and agentic AI applications.

PROFESSIONAL EXPERIENCE

Signify | Burlington, MA May 2017 - August 2026
Principal Software Engineer

Signify Intelligence · 2026

- **AI application platform:** Built the Signify Intelligence Console frontend and web server from scratch (Next.js on ECS Fargate/CloudFront, AWS CDK, DynamoDB), providing centralized authentication, authorization, app discovery, and delegated administration for the group's first two AI products and internal tooling.
- **Audit 360:** Led UX and frontend architecture for an AI-assisted lighting audit application. Built the workflow around project creation and membership, role assignment, pipeline status and error reporting, results and asset download, and human review of AI-detected fixtures. Integrated a colleague's Python review service into the application as a sidecar to the Next.js stack.
- **CrossSpec:** Designed the typed agent-to-client message contract for a conversational product-reference assistant, enabling interactive interfaces. Contributed to UX and LangGraph conversation design for a product that reduced 30–45-minute manual lookups to minutes.

IoT Platform · 2017–2026

- Founding engineer of the IoT Portal, initially building the product independently for two years. Took it from first commit through 85+ releases over 8 years as the console used by Signify business groups and OEM customers to manage devices, schemas, user identity and policy management, data lake files, dashboards, and data processing workloads.
- Re-architected the IoT Portal in 2024 from a monolith into a micro frontend system (Module Federation, Vite monorepo), letting modules be developed, tested, and deployed independently, embedded in a shared session or run standalone. Built the Node.js web server handling OAuth code exchange, federated login across vendors, sessions, and secure multi-tenant asset delivery.
- Owned the Self-Service Tools team's technical roadmap, UX, backlog, code review, and production releases. Worked directly from high-level requirements to define sprint-sized work across both EU and China deployments.
- Established a release-every-sprint cadence, including 15 production releases across nine consecutive sprints in 2019 as the sole engineer and 13 releases in 2021 as a team of three. Maintained 85%+ automated test coverage, 90%+ sprint completion, and delivered every committed roadmap item in 2024 and 2025.
- Established an independent deployment in China on Alibaba Cloud and migrated the AWS deployment from Serverless Framework to CloudFormation across four environments.
- Grew the product from a one-person project into a four-engineer team as adoption earned additional investment. Hired the second engineer, mentored a co-op into a full-time hire, and onboarded two junior developers while remaining the hands-on technical lead and architect.

BRIDJ | Boston, MA March 2015 – April 2017
Lead Mobile Engineer

- Joined before the Series A as Bridj's first full-time app developer, responsible for native Android and iOS development across the customer-facing rider app and the internal application used by every Bridj driver.
- Rebuilt an untested contractor-developed Android application around an MVP architecture with dependency injection using RxJava, Dagger, and Retrofit, adding comprehensive unit and functional UI test coverage.
- Owned the two-week Android release cycle and reviewed all Android pull requests for code quality and test coverage.
- Worked directly with product and design on feature discovery and monthly product roadmaps.

HERE (a NOKIA company) | Cambridge, MA October 2011 - December 2014
Senior Software Engineer, Web & Mobile Apps

- Built the collections feature for the Android HERE Maps client and the internal API supporting it, designed to remain memory-efficient and fully functional offline across a wide range of Android devices.
- Prototyped an offline-first iOS application using the HERE Maps SDK.
- Developed Nokia Pulse, a hybrid HTML5 group-messaging application, and Nokia Profiles, a Backbone.js web application backed by a Rails API.

NOKIA | Burlington, MA June 2006 - December 2011

Sr. Web UI Software Engineer

- Built an internal developer portal used to integrate products with Nokia services including SSO and cloud infrastructure.
- Designed and implemented a collaborative code-sharing application and a real-time analytics system used to surface trending content.
- Built Java and Spring-based load-testing, scheduling, and memory-analysis tools used by QA teams to test mobile enterprise servers and clients.

PERSONAL PROJECTS

PLANESTRO

Agentic software development orchestration · TypeScript · Node.js · MIT Open Source | github.com/gravesisme/planestro

- Built a local-first system that takes a backlog item through planning, human approval, implementation in an isolated git worktree, pull request, rebase, CI, merge, and cleanup.
- Designed the system so LLM agents handle planning and implementation while deterministic code owns mechanical operations and state transitions.
- Orchestrate agents with different capabilities and trust models on the same feature, including Claude Code for planning and development and sandboxed Codex for raster-art work, with dependency ordering between tasks.
- Designed for recovery rather than ideal execution: human decisions persist and resume after restart, startup reconciliation converges incomplete work, and destructive cleanup requires positive evidence before proceeding.

HURRICANE HARRISON

iOS roguelite survival game · Godot 4.6 · Live on the App Store

- Designed, built, and shipped a top-down auto-battler with five levels, unique bosses, multiple difficulty modes, character progression, skills, shops, and exploration.
- Used Planestro to coordinate development across multiple AI agents working in parallel isolated worktrees.

TECHNICAL SKILLS

Languages: TypeScript, JavaScript; Java (prior professional experience)
Web & Architecture: React, Next.js, Vite, Node.js, REST APIs, micro frontends, Module Federation, OAuth 2.0 / OIDC, federated authentication
Cloud & Delivery: AWS, ECS Fargate, CloudFront, S3, DynamoDB, PostgreSQL, Lambda, Bedrock, AWS CDK, CloudFormation, Docker, GitLab & GitHub CI/CD, Alibaba Cloud
AI & Agents: Agentic application architecture, agent orchestration, human-in-the-loop workflows, structured agent-response contracts, conversational UX; Claude Code, Codex, LangGraph, Bedrock AgentCore, Ollama

EDUCATION

B.S. Computer Science - Virginia Tech, 2006