

DAN WALSH

Senior Software Engineer | AI-native - research-first, architect-then-build, verify

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SUMMARY

Senior Software Engineer (9+ years), AI-native in practice: research-first, architect-then-build, verify. Deep React/TypeScript, broad full-stack. My focus is the more scarce part of working with AI - judging whether what it produced can be trusted, and building the loops that catch where it can't. Beyond delivery: architected infrastructure modernisation across 30+ developers and drove adoption of AI-assisted workflows in my engineering org. Full positioning at danwalsh.co/how-i-work.

EXPERIENCE

Senior Software Engineer | PensionBee | Remote | Jan 2024 - Present

React, TypeScript, Next.js, React Native, Node.js, Python, Heroku, Postgres, Docker, Cloudflare (Workers, D1, KV, Queues)

- **AI Engineering Innovation Lead.** Led AI-augmented workflow adoption across engineering: shipped a test-case generator and an AI-skills-analyser PoC with educational docs, piloted agentic coding tooling, and co-ran an AI-focused hackday that catalysed cross-team adoption. Coordinated rollout across senior engineering stakeholders.
- **Withdrawals Journey Architecture.** Led architecture and delivery of complete customer withdrawals journey rewrite (legacy → React/Next.js), with two mid-level developers and cross-functional collaboration across Product, UX, Banking, and Compliance. Delivered company-wide architecture presentation.
- **Platform-layer impact.** Diagnosed organisational issues from technical symptoms (8-page report shared with VP Engineering on joining). Championed team psychological safety, advocated for mislevelled engineers (both progressed). Subsequently redeployed across teams as senior resource on the basis of the pattern. Architected Node.js v16→v20 migration strategy for 30+ developers; co-created shared React component library replacing fragmented UK/US libraries.

Earlier at PensionBee: **Software Engineering Manager** (Aug 2023 - Jan 2024) running engineering function hackathon and contributing to engineering management strategy; **Senior Software Engineer** (Oct 2022 - Aug 2023) leading mandatory 2FA, regular drawdown features, and React/Redux/React Native training.

Software Engineer II | Puppet | Remote | Apr 2021 - Oct 2022 | *React, GraphQL, Apollo, Go, Python, Docker, Kubernetes, GCP*

Software Engineer II | Bazaarvoice | Belfast | Mar 2020 - Mar 2021 | *React, Redux Saga, WebdriverIO, GraphQL, Node.js, Docker*

Software Engineer / Junior | ShopKeep | Belfast | Jun 2017 - Mar 2020 | *React, Node, Python/Flask, Ruby/Rails, AWS*

SELECTED PROJECTS

- **Momentum MCP Server** - Production MCP server in Go on Fly.io with bearer + OAuth auth and GitHub API-backed storage. Exposes personal productivity context to any Claude interface. Demonstrates MCP protocol implementation, Go backend, and AI-ambient infrastructure. github.com/dang-w
- **INTORA SYSTEMS** - Generative art catalogue spanning three series under a documented human-AI collaboration model (the SIG series originates from Claude's conceptual reasoning rather than visual iteration). Next.js, TypeScript, Canvas, Tone.js. intora.net
- **Signal & Noise** - Real-time glitch art application: 34+ effects across 9 categories, 18 blend modes, Canvas API and Web Workers for 60fps rendering. Next.js, TypeScript, Python, FastAPI.
- **Amber Schematic** - Dark VS Code theme with warm amber accents, published to VS Code Marketplace and Open VSX.

SKILLS

Frontend (deep): JavaScript, TypeScript, React, Next.js, React Native, Redux, Tailwind, design systems, component architecture, accessibility.

AI Integration (developing depth): LLM API integration (Anthropic, OpenAI, OpenRouter), MCP protocol, context engineering, agent orchestration, prompt engineering, RAG, AI-assisted development workflows.

Broad: Node.js, Python (FastAPI), Go, PostgreSQL, GraphQL, Docker, Kubernetes, AWS, GCP, Vercel, Fly.io, CI/CD (Jenkins, Bitrise).

Leadership & practice: Technical strategy, infrastructure planning, developer experience, cross-functional collaboration, mentorship, architecture advocacy, testing (Jest, Pact, Cypress, WebdriverIO), Agile.

EDUCATION & CERTIFICATIONS

AWS Solutions Architect (microcredential), Open University / FutureLearn, 2022 · Postgraduate Certificate in Computing, Open University, 2017 (Pass with Merit) · BA (Hons) Liberal Arts with History, St Mary's University College, 2010 (2:1)