

Simon Betton

Principal Software Engineer

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I'm a principal software engineer with 19 years across backend, frontend, mobile and cloud. I turn ambiguous, high-stakes product problems into architecture that stays simple as products and teams grow.

I've set technical direction for **ANZ's home loan platform**, a learning platform serving **4M+ users**, a greenfield **crypto payments** product, and live-TV systems that absorbed **hundreds of thousands of concurrent users within minutes**. As AI lowers the cost of writing code, the leverage moves to system design: I build codebases engineers and AI agents can change safely, and ship production LLM systems with real guardrails. The result is faster delivery, lower cost and less risk.

Selected impact

- **Cut infrastructure cost by 96%** versus colocated servers at Buzzdial (avoiding ~\$1.2M capex and \$24K/month), while holding **>99.99% availability** and **<400ms** responses for live TV audiences across ITV, Seven, Ten and SBS.
- **Architected ANZ's home loan workflow platform** (HLQ): a versioned rules DSL with human-in-the-loop fallback, so automation failures became tasks for people instead of stalled applications, **with no SLA impact**, on a **fortnightly release** cadence.
- **Founding principal engineer** on Such, a non-custodial crypto wallet with merchant invoicing and payments, setting the architecture and the AI-assisted engineering model the team builds on.
- **Delivered GetSetUp Embedded**, taking a 4M+ user learning platform into enterprise partner products including AOL, and was technical lead on its platform rewrite.
- **Rescued at-risk projects**: rebuilt an unstable learning game for Alberta Health Services that still runs in classrooms, and migrated McDonald's NZ nationwide Wi-Fi to a new platform **with no service interruption**.

Experience

Principal Software Engineer at **House of Doge**

Mar 2025 – Present

Building products that increase Dogecoin's utility and adoption. Founding engineer.

- Own architecture and technical strategy for a greenfield React Native platform, including **Such**, a non-custodial iOS/Android wallet with merchant invoicing and payments (BIP32/39/44 key management).
- Designed a feature-oriented monorepo with **contract-first Protobuf APIs (Connect RPC)**, strict boundaries and end-to-end type safety, so features ship in parallel without architectural drift.
- Made the codebase **agent-ready**: agent skills, ADRs, domain docs and **automated quality gates** (CI/CD, testing standards, complexity budgets) that apply equally to human and agent-written code. Built a token-driven design system aligned with Figma.

Technical Lead at OneTwo (for ANZ Australia)

Jul 2023 – Mar 2025

The automation platform ANZ uses to process home loans, unifying fragmented banking systems into one workflow with document intelligence and human-in-the-loop decisioning.

- Led one of four engineering teams and was **domain architect for HLQ**, the loan workflow orchestration platform, setting architectural direction across the wider platform.
- Owned the customer-facing application, UI library, business rules engine and **versioned, human-readable DSL**, workflows, and integrations with ANZ's legacy lending systems. Workflows and rules were versioned and pinned per application.
- Standardised operator work into **~40 strongly typed task patterns**, giving operators a consistent experience and engineers one predictable way to add new products and workflows.
- Resolved operator delays on **100+ page document packs over VPN** by reusing decoded images and bounding what stayed in memory. Code owner for critical shared components. Grew junior engineers into independent domain owners.

Lead Software Engineer at GetSetUp

Oct 2021 – Jul 2023

Live-learning platform for 4M+ older adults, running live interactive classes, content, subscriptions and partner integrations.

- **Technical lead on the platform rewrite**: a GraphQL backend-for-frontend, a Presentation API that renders layouts server-side, and a microservice platform on **AWS EKS**.
- Architected and owned core services: content layer, Zoom-based class sessions, scheduling, admin app, partner attribution, and the event pipeline into Amplitude and Zendesk.
- Delivered **GetSetUp Embedded**, letting enterprise partners including **AOL** put the learning experience inside their own products.
- Worked with technical leadership to move legacy monoliths to **modular, independently deployable services**.

Head of Technology at General Studios

May 2021 – Oct 2021

- Standardised delivery, development and DevOps workflows across client projects. Contributed to technical hiring, resource planning and engineering direction.

Head of Technology (2019–21), Technical Lead (2016–19) at DDB New Zealand

Feb 2016 – May 2021

Led the agency's digital engineering practice, delivering platforms and SaaS products for commercial, government and enterprise clients.

- Led engineering on work recognised with 11 Effie Awards, Best Design Awards and CSS Design Awards. Modernised the practice around React, Next.js, TypeScript, GraphQL and serverless AWS.
- **Fight for Territory (Lion, Auckland Airport)**: built the whole system for **65 4K screens**, from browser-based face detection on Raspberry Pi to a real-time state API and ops dashboard, with failover so a dropped camera or network never froze a screen.
- **Re:scam (Netsafe)**: sole engineer on the 2017 bot (IBM Watson classification). Led the 2019 rebuild for Westpac on Google Cloud with sensitive-data detection and Algolia retrieval, completed and penetration-tested.

Real-time audience sentiment for live TV. One of two engineers.

- Shipped the first stage in **4 weeks**. Owned client interfaces and co-built the API, per-second sentiment pipeline and auto-scaling multi-AZ AWS platform. It captured **32M+ data points** for the 2015 UK ITV Leaders Debate, Shark Tank Australia, SBS Eurovision and the 2015 Rugby Championship.

- **Sole developer of TVNZ OnDemand**, New Zealand’s first on-demand streaming app for phones and tablets (Brightcove). Both apps hit **#1 on the store charts** and won multiple Best Awards. Also built NZ Funds’ award-winning myWealth planning tool.

Earlier: Full Stack Engineer, The Web Company (2007–09) · Tutor, National College of Design and Technology (2009–10)

Independent and open-source work

- **OnlyDoge** (built solo): Dogecoin block explorer and analytics platform with a custom indexer, ClickHouse warehouse, and an **AI analyst** limited to 8 read-only tools, with hard step and time limits, AST query validation and refusal of financial advice.
- **KiwiCV**: free CV service for migrants, built on a **nine-stage durable pipeline** (Inngest) with OCR and multimodal extraction, human confirmation, **3-vendor LLM fallback**, and an audit model that blocks output not backed by confirmed facts.
- **ratesapi.nz** (public NZ lending rates API with OpenAPI and **MCP** from the same lookups), **easydoge-km** (one Rust key-management core with Swift, Kotlin, Expo and CLI bindings via UniFFI), and **expo-easy-passkey** and **expo-device-auth** (passkey and biometric modules for Expo).

Skills

Architecture & leadership	System design, technical strategy, contract-first APIs, domain-driven boundaries, ADRs, code ownership, mentoring, cross-team alignment
AI engineering	Agent-ready codebases, agent skills, LLM pipelines, tool-using agents, guardrails and audit models, multi-vendor fallback, MCP
Languages & frontend	TypeScript, JavaScript, Go, Rust, PHP · React, React Native, Expo, Next.js, TailwindCSS, Storybook, token-driven design systems
Backend & data	Node.js, Protobuf/Connect RPC, GraphQL, PostgreSQL, MySQL, DynamoDB, Redis, ClickHouse
Platform & quality	AWS, Kubernetes, Docker, GitHub Actions, GitLab, OpenTelemetry, Sentry, Jest, Vitest, Playwright, Cucumber, Maestro