

Samuel Levens

Senior Software Engineer · Generative AI

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Full-stack TypeScript engineer and tech lead across startups, Atlassian and Relume.

I build generative AI products and the tooling that lets AI agents work inside real systems. I led Relume Studio, an AI image generation product, from prototype to launch. I also wrote the MCP server that lets Relume's AI build with its component library.

I define the architecture for new product areas, take them to production and harden them with tests, metrics and explicit failure handling.

EXPERIENCE

Senior Software Engineer · Relume

Jan 2026 – present

Tech lead for two product areas on Relume's Nova platform: Relume Studio, a generative AI image product, and the component Builder that produces Relume's component library and every published site.

Relume Studio: generative AI image product tech lead · Sep 2026 –

- **Took Studio from prototype to production in three weeks**, defining its architecture as an independently deployed app on Nova's shared auth, workspaces and analytics, and led it through public launch.
- **Shipped the full generative feature set for launch**: reference-image Styles, consistent People and Scenes, image refinement and a Library synced into the site editor.
- **Kept generations flowing through provider outages and rate limits** by architecting a BullMQ pipeline with fallback across OpenAI and Google models, retries, fair queueing and hand-back of in-flight jobs on deploy.
- **Made every generation's cost visible and capped before launch**: per-token metering against plan spend caps, per-job cost in PostHog, Grafana timings, failure-rate alerts and a kill switch.
- **Cut AI upscaling cost by 87–99%** against every alternative evaluated by designing it on a Cloudflare Worker, now adopted by the editor team.
- **Cleared Studio for launch in a single day**. Ran a 10-area readiness review, resolved 50 of its 51 findings overnight and took the product to a GO decision.

AI agents and the component Builder tech lead · Feb – Sep 2026

- **Gave Relume's AI direct control of the component library builder** by writing the Builder MCP server, which replaced the in-app chat, and hardened it with secure pairing and reconnection recovery.
- **Let AI agents check their own work** with a `qa_component` check across schema, editor and published output, plus selection criteria for choosing components.
- **Defined the component architecture behind every Relume site**, from variants and slots to per-instance overrides, and led its schema rework across 270 files with all 1,989 tests passing.
- **Let designers and AI agents edit one library at once** with Git-style branching and three-way merges.
- **Cut published-site JavaScript by 96%** by leading the move from React hydration to server-rendered HTML with a lightweight vanilla runtime, and unified three render pipelines into one.
- **Halved backend idle memory and ended out-of-memory crashes** without raising limits, and introduced Sentry and OpenTelemetry tracing.

Software Engineer · Atlassian, Commerce

Jan 2022 – 2025

Engineer on the billing experience used by every Atlassian Cloud customer.

- **Brought billing into Jira and Confluence** by leading its migration to a micro-frontend architecture embedded in each product.
- **Turned billing changes into measured decisions**. Designed experiments on billing flows and ran the data science and analytics myself, from success metrics to analysis and the ship decision.

- **Shaped the billing platform’s architecture for reuse across the Commerce department**, so teams could share code instead of rebuilding it.
- **Owned the billing console end to end** in React, Node.js and GraphQL, including the React 18 upgrade and a rebuilt lint pipeline that cut CI noise.

Senior Software Engineer · FrankieOne

Sep 2021 – Jan 2022

- **Opened identity verification to client customisation and mobile** by rewriting the flow in React, replacing a legacy Vue implementation.
- **Let clients embed KYC and AML checks in their own products** by designing a JavaScript SDK for web and mobile apps.

Systems Architect and Full Stack Developer · GADA Technology

Jun 2020 – Jan 2022

- **Promoted from front end contractor to systems architect** within the first month.
- **Sped up delivery on large B2B integrations** by architecting a React front end around client-specific feature toggles.
- **Introduced CI/CD and automated testing** with GitHub Actions and Cypress, and set the team’s accessibility standards.

Front End Developer · Eventhub

Jan 2019 – Jun 2020

- **Built the ticket purchasing flow** and core React components for a greenfield product, improving accessibility and responsiveness.

Business development · Groupon, NSW Business Chamber, Specifier

2015 – 2018

Sales, client onboarding and stakeholder outreach.

SKILLS

Generative AI	OpenAI and Google image models, Vercel AI SDK, Mastra, Model Context Protocol servers, agent validation checks
AI-native workflow	Claude Code and Codex agents in parallel git worktrees, plan-first delivery, agent-run code reviews, agent guidance files
Architecture	Micro-frontends, backend-for-frontend, queue-based job pipelines, server-rendered publishing, written design docs
Frontend	TypeScript, React, MobX, TanStack Query, React Router, accessibility
Backend	Node, Hono, GraphQL, Prisma, PostgreSQL, BullMQ, Redis
Edge and cloud	Cloudflare Workers, Pages, Images and R2, AWS, Kubernetes, OpenTofu, Docker
Data and quality	Experiment design and analysis, PostHog, SQL, Vitest, Jest, Playwright, Sentry, OpenTelemetry, Prometheus, Grafana

SIDE PROJECTS

Unity games	The Patient Machine, Dicey Defense and Rogue Party: mobile games on pure C# cores for iOS and Android.
agent-dispatch	local coordinators for Claude and Codex workers, with a terminal-style control console.

EDUCATION AND COMMUNITY

University of Sydney · BE (Mechatronics) and BCom (International Business) · 2016

Career mentor, headspace · volunteer mentor for young people · 2023 – 2024