REI NOVA

FOUNDER & ENGINEER SPECIALIZING IN AI SYSTEMS & PAYMENTS INFRASTRUCTURE

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PROFILE

I build teams and scale codebases. In my previous tenure at Shakepay I shipped code reaching 80,000+ daily active users across the entire tech stack (backend, infra, mobile, web-app & internal systems) on a financial system processing over $1 billion in volume per year. I'm currently running Soulbound Labs, where I build AI agent infrastructure and put that same stack to work for startups and SMBs.

WORK EXPERIENCE

Cofounder & Head Of Technology @ Soulbound Labs 2025 November - Present

- Shipped **Clawcraft**, a multi-tenant AI agent runtime: Rust execution with per-tenant compute isolation on Kubernetes, model routing across multiple inference providers (OpenRouter, LiteLLM, AWS), MCP tool integrations, a multi-channel relay, and metered billing.
- Built and open-sourced **Substrate**, an execution harness for agent fleets. It decomposes a brief into a machine-readable spec and a dependency graph of units, runs agents in parallel isolated worktrees, and gates every merge on machine-checked criteria.

Cash Squad Tech Lead @ Shakepay 2025 January - 2025 October

Achievements

- Reinforced the technical robustness of Shakepay's e-transfer cash-in system which processes more than $1.1 billion per year. I reduced banking provider session authentication creation time from 30 seconds to less than 1 second. I also built fallback systems that process more than $10 million per year.
- Optimized e-transfer cashout systems which process more than $700 million volume per year. I performed mass data migrations to reduce latency on a core endpoint from 2 seconds to 200 milliseconds. I also automated self-cancellation flows saving customer support representatives over 260 hours work per month.
- Architected an online refund channel for the card program that introduced an additional $2.2 million transactional volume per year.

Day-to-day

- Set sprint milestones with engineering and product managers, split work across teams, and shipped daily to 80,000+ daily active users across cash, risk and internal systems. Drove developer-experience initiatives — RFCs introducing clearer design patterns and domain models, decomposition projects, and better backend and mobile test coverage.
- Led technical interviews (over 50) and onboarded new devs (10), and provided technical mentorship through 1:1s and code reviews.

Senior Developer @ Shakepay 2023 June - 2025 January

- Transformed business processes by introducing AI into the tech stack. In an internal hackathon I used open-source language models to generate fraud reports that reduced unit cost by 50% whilst respecting data privacy concerns. This automation saves over 1,200 hours of fraud analyst work per year. It also sparked the wider adoption of AI throughout the organization.

- Architected and implemented the Direct Deposits backend with Payments Canada and handled all aspects of implementation including direct connectivity testing, transaction processing, QA and fraud prevention. More than $70 million of customer salaries are processed by direct deposits each year; the system has received no downtime to-date.
- Led the migration of internal tooling from a Vue.js app to the low code platform Retool to maximize developer productivity.

Full Stack Developer @ Shakepay 2021 September - 2023 June

- Architected and implemented the Wire cash-outs system which processes over $95 million of funds per year.
- Fixed a broken data model by backfilling over 440,000 records and then automated payout processes (~2,309 new records per month) that continue to save up to 277 hours of labour-time per month
- Architected and implemented an unsupported ERC-20 token system on Fireblocks that has processed more than ~315,000 USDC to date.

Full Stack Developer @ Yap.cx 2019 June - 2021 September

- Architected and implemented core product offerings such as a BTC Pay server, a compliance engine to enforce Fintrac / AML specifications, and a risk management system to strategically price currencies based on internal balances and competitor exchange data.
- Set sprint milestones, compiled technical documentation, led code reviews and managed server deployments & database backups.

Teacher @ Le Wagon Coding Bootcamp 2019 April - 2021 February

- Delivered lectures on Ruby on Rails and Data Science and acted as technical lead for student final projects.

HACKATHONS

🏆 **Winner — Return Of The Agents, San Francisco** 2026

- Shipped Substrate, an execution harness for agent fleets, and used it to build and deploy an entire web-app — Roastybara — in under 30 minutes, start to finish.

🏆 **$10,000 Winner — AuraSci, Boston MA** 2025

- Shipped Ideosphere, a decentralized prediction market for science. Covered by Cointelegraph.

🏆 **1st Place — Radix Hackathon, London UK** 2024

- Shipped Geochain, a dApp on the Radix blockchain that lets shipping companies gate escrow payments on the GPS location of shipments.

🏆 **Best UX, Best Public Good & Best Built On UMA — ETH Global, New York City** 2023

- Shipped Swirl, a decentralized P2P funding platform for scientific research.

EDUCATION

M.A. Distinction (Valedictorian) - Philosophy, Politics & Economics @ The University Of York (UK) 2015 Sept - 2016 Oct

- Wrote my dissertation on predictive models of intra-state conflict that yielded new policy insights predicated on the correlation between refugee camp location and conflict escalation.