

# Eugene Upston

Senior Software Engineer

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## SUMMARY

Senior software engineer focused on agentic AI products and design-led frontend, with 8+ years at venture-backed startups in the US and New Zealand, including Soul Machines, Centrality and Spaceport. I own agent features end to end, from the workflows and data behind them to the design systems and React/Next.js interfaces people use.

## EXPERIENCE

**Spaceport** — AI agent platform (Side Chat) and IP-licensing protocol (Cultura) Boston, MA · Remote

**Senior Full Stack Developer · Side Chat, agentic AI platform · 1,000+ commits in 2026** Feb 2026 – Present

- Built the durable workflow engine on Vercel Workflows, then led its migration to Restate: workflow builder, versioned step runs, fan-out/for-each, cron scheduling and human-in-the-loop approvals.
- Built services in Canopy, the runtime between agent harnesses (Claude Code, Codex, Cursor) and LLMs: browser sessions, a Functions sandbox, tables, messaging and OAuth; contributed to our MCP server.
- Led design engineering: the Canopy brand and design-system kit (tokens, Storybook, Chromatic), generative UI, approval UX and a live theme switcher for agent-generated apps.
- Built real-time delivery: SSE streaming for agent chat and Postgres-to-WebSocket notification fan-out.
- Designed a Postgres tables service (optimistic concurrency, schema versioning, CSV/XLSX import) with Drizzle migrations.
- Built agent browser automation on Browserbase and Cloudflare: portal login engine, OTP capture and session recordings.
- Work on GCP infrastructure as code with Pulumi (GKE, Cloud SQL, Pub/Sub, monitoring), plus CI gates and Claude API-powered code review.

**Senior Full Stack Developer · Cultura IP-licensing protocol & marketplace** Oct 2024 – Jan 2026

- Led development of the Cultura SDK (TypeScript, viem/ethers, TypeChain, GraphQL/The Graph, Vitest), shipping versioned RC and stable releases through devnet and testnet, plus its documentation site.
- Built the Cultura dApp and subgraph, plus six GitHub Actions pipelines for RC/stable releases and PR end-to-end tests.
- Built marketplace features on Postgres: role-based access, licensing approval flows, a Printify integration with a mock API service, and a Playwright end-to-end suite.

**Bamburai** — AI product studio Bali, Indonesia

**Director of Technology** Apr 2023 – Oct 2024

- Set technical direction and managed the development team across AI, Web3 and web products.
- Built BrandPro.ai, an AI branding platform generating brand kits with image models (Next.js, Supabase/Postgres, Replicate), plus its product API.
- Launched a self-serve web-product subscription on Stripe, Webflow and Zapier.

**Paragons NFT** — Web3 gaming collectible Auckland, New Zealand

**Founder & Technical Lead** Jan 2022 – Feb 2023

- Led a team of three developers from concept to launch. Built Solidity contracts (Hardhat), a Node/TypeScript API, Discord bots, a Python/Blender render pipeline on AWS, and an immersive 3D web experience (Next.js, R3F, WebGL).

**Centrality (CENNZnet)** — Layer-1 blockchain, New Zealand

Auckland, New Zealand

**Full Stack Developer**

May 2021 – May 2022

- Built a Node.js/RabbitMQ relay bridging CENNZnet and Ethereum, plus Hardhat-tested bridge contracts.
- Maintained the explorer backend (NestJS, SQL, Redis) and extended the open-source TypeScript SDK.
- Built DeFi dApps for swaps, liquidity pools and bridging (React, TypeScript); CI/CD with GitHub Actions.

**Non-Fungible Labs** — NFT studio (FLUF World)

Auckland, New Zealand

**Senior Developer**

Sep 2021 – Nov 2021

- Core developer on a multi-million-dollar NFT launch; built the minting and holder dApps with Next.js and TypeScript.
- Built the 3D render pipeline on AWS, MongoDB and Blender that generated the collection assets.

**inMusic** — Music technology (Akai, Denon DJ, Numark)

Auckland, New Zealand

**Software Engineer in Test**

Sep 2020 – May 2021

- Designed a TypeScript/Jest/Docker test framework for a gRPC service; automated tests in Qt/QML, C++ and Python.
- Tracked CPU, memory and performance metrics with the ELK stack and Vega; maintained Jenkins CI and CMake builds.

**Soul Machines** — AI digital humans

Auckland, New Zealand

**Software Pipeline Engineer**

Jun 2019 – Sep 2020

- Automated the artist pipeline for AI digital humans with Python, Qt, Flask and MongoDB; built batch tools for Maya, Nuke and Agisoft.
- Built and managed a serverless render farm on AWS (Deadline, EC2 Spot Fleet); deployment tooling with Git and Jenkins; Pytest unit and integration tests.

**Technical Artist**

Apr 2018 – Jun 2019

- Built text-to-speech voices for enterprise clients, Python TTS tooling and a client-facing web app on GCP.

SKILLS

|                |                                                                                                      |
|----------------|------------------------------------------------------------------------------------------------------|
| AI & Agents    | Claude API · MCP · Vercel AI SDK · Agent runtimes & evals · Generative UI · Claude Code · Cursor     |
| Frontend       | React · Next.js · TypeScript · Tailwind · Design systems · Storybook · Three.js / R3F · WebGL / GLSL |
| Backend        | Node.js · Hono · NestJS · Restate · gRPC · GraphQL · REST · SSE / WebSockets · Python                |
| Data           | PostgreSQL · Drizzle · Supabase · Redis · MongoDB · The Graph                                        |
| Cloud & DevOps | GCP (GKE, Cloud SQL, Pub/Sub) · AWS · Pulumi · Docker · GitHub Actions                               |
| Quality & Ops  | Vitest · Playwright · Chromatic · OpenTelemetry · Sentry · PostHog · Auth0 / OAuth                   |

SELECTED INDEPENDENT WORK

**Wurkbox** (2026) — Full SaaS build: Next.js, Drizzle, Postgres/Supabase, tRPC, Stripe, Vitest and Playwright.

**Tectonic Labs** (2025) — Post-quantum (Falcon-512) Ethereum wallet browser extension and app.

**Creative & 3D** (2022 – 2025) — 3D web work for Geist × Harvey AI, Infisical and more.

**eupston.com** (2025 – 2026) — Portfolio with a raymarched GLSL/R3F scene and a Claude-powered "virtual self" chat.

OPEN SOURCE & PROJECTS

**Deepbeat** — Deep-learning model that converts beatboxing into MIDI drums.

**Deepbox** — Real-time C++ neural-net audio plugin that classifies beatboxes.

EDUCATION

**Grad. Diploma, Audio Engineering** — MAINZ Auckland · 2016

**BFA, Electronic Arts** — University of New Mexico · 2013