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↗ = clickable link

SUMMARY

Self-taught. I'm the sole developer of Traders Room, a real-time analytics platform for futures and options traders that is in beta and not yet released. I built all of it, from the data pipelines and pricing models down to the Linux servers it runs on. I build things from scratch to learn how they work, then try to break them. I care about speed and build with security in mind from day one.

EXPERIENCE

Traders Room — Co-Owner & Sole Developer — BETA · NOT YET RELEASED — 2026 – Present

- Built the whole platform in Python and JavaScript: live dashboards, interactive charts, 3D data views, accounts and sign-in (Discord, Google), a members' academy, a trading journal and an admin panel.
- Built the pipelines that pull options and futures data and publish it nightly and live through the trading day, and wrote the options and volatility models behind its levels, expected ranges and probabilities.
- Profiled the stack and fixed what was actually slow. Main pages went from 25 ms to about 6 ms of server time, memory use roughly halved, and cutting repeated TLS handshakes freed up most of the web server's CPU.
- Rewrote the live market-data reader to keep up with about 17,500 messages a second, then wrote a load-testing tool that replays real user sessions. It handled 200 simulated users at once with zero errors.
- Locked down the app and servers: server-side login and role checks, secure cookies, CSP, TLS, key-only SSH and services that run with only the access they need. Then moved everything to a new host with daily backups.

Discord Communities — Community Manager & Bot Developer — 2023 – Present

- Set up and ran communities of several hundred members, from roles, permissions and onboarding to handling reports and disputes, and automated the repetitive moderation work.
- Wrote a Python bot that verifies members, hands out roles and re-checks everyone every 12 hours, removing access with a DM explaining why.
- Linked Discord roles to website sign-in and moved all 216 verified members to the new bot with no re-verifying.

PROJECTS

Lattice ↗ C#, .NET, distributed systems Raft-replicated key-value store with a deterministic chaos simulator and a linearizability checker: 16,000 fault-injected runs with 0 consistency violations, and all 5 planted bugs caught.

Basalt ↗ C#, .NET SQL database from scratch (pages, B+tree indexes, WAL). Killed 547 times mid-write; 0 of 31,015 commits lost.

Glyph ↗ TypeScript Scripting language with a Pratt parser, bytecode compiler, stack VM and browser playground. About 79,000 fuzzed programs matched a second interpreter with 0 disagreements.

Pulse ↗ C#, .NET Time-series database with Gorilla-style compression (3.3 bytes per tick, 4.9x smaller) and block summaries that answer month-long candle queries about 300x faster.

Tripwire ↗ Python Flags malware in new PyPI and npm packages without running their code; six analysers, 633 tests.

Reviewbot ↗ Python, LLM APIs Pull-request security reviewer where rules find the bugs and an LLM may only explain confirmed findings. 95% of planted bugs caught, 0 false alarms on my test set.

Inkwell ↗ TypeScript Offline-first collaborative editor on a hand-written CRDT; resyncing 200 offline edits sends 2.7 KB, not 509 KB.

Overfit Lab ↗ Python, statistics Separates real backtest edges from luck (Deflated Sharpe, PBO, SPA, Romano-Wolf from the papers). On pure noise it flags 3 to 6%; a naive test flags 100%.

Options model reverse-engineering Python Rebuilt how two commercial analytics platforms calculate their options levels, from scratch with licensed data. My Greeks matched a reference source to within 0.1%.

Duet Electron, WebRTC · private, not publicly released Encrypted peer-to-peer video calls and remote help: screen sharing, drawing on the other screen and host-approved remote control with a panic hotkey.

Quant research Python, C# 51 studies on 15 years of tick data with out-of-sample, placebo and holdout tests, and 20+ real-time indicators. Most ideas failed, and I wrote up every one.

SKILLS AND EDUCATION

Languages / Python, TypeScript, JavaScript, C#, SQL, HTML/CSS
Tools / FastAPI, .NET, pandas, numpy, Electron, WebRTC, Caddy, systemd, py-spy, xUnit, pytest, Vitest
Systems / Linux (Ubuntu), SSH, VPS hosting, backups, server hardening, TLS, CSP, OAuth, Discord bots and automation
AI / LLM APIs, prompt design, grounding and output checks, AI coding agents (Claude Code)
Spoken / English, Jamaican Patois, Spanish (basic)
Education / Jamaica College, Kingston · High School Diploma, 2023