

Vu Nguyen

Senior Software Engineer · AI agents, financial systems, data platforms

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Houston, TX · Open to relocation to Singapore · Visa sponsorship required

EXPERIENCE

Phantom — Senior Data Scientist

2026 · Remote

- Built a production AI data-exploration agent for warehouse analytics. Metadata retrieval finds the right data, sandboxed code-mode Python runs the analysis, and template-driven HTML reports make the result inspectable. Shipped as an interactive CLI and a 15+ tool MCP server for native Claude Code and Claude Desktop use.
- Built the agent's evaluation and observability plane: five-signal citation scoring tuned with Optuna + MLflow against a held-out retrieval set (recall@k, precision@k, MRR), plus per-turn traces for token cost, tool calls, row counts, and context size. SQL AST validation, a query gateway, isolated filesystems, and a tool allowlist bound what the agent could execute.
- Root-caused a volume cliff in a DEX aggregator's fee mechanism and modeled a previously untracked trading-bot pattern into a canonical on-chain dataset. When an onboarding analysis was blocked by missing events, shipped the instrumentation directly into the mobile wallet repository with mobile engineering.

Independent Builder — Software & AI Engineer

2025-Present

- Built financial systems where agents are first-class actors: private payments and ZK loyalty (Sen + Agora), a non-custodial copy-trading product with LLM-classified market signals (Rubick), and APIs shaped for programmatic agent consumption.
- Built the supporting agent-tooling layer across TypeScript, Python, Go, and Rust: MCP servers, multi-agent orchestration, microVM sandboxes, typed event streams, durable workflows, evaluation harnesses, and structured supervision interfaces.

Consensys (MetaMask) — Staff Data Engineer

2022-2024 · Remote

- Led schema-as-code for MetaMask analytics events: canonical schemas in Git-tracked configuration, Node.js validation tooling that flags breaking changes and generates compile-time client types, Docker + GitHub Actions enforcement, and an auto-documented event browser.
- Drove cross-team adoption until data contracts became the normal path for shipping instrumentation, replacing conflicting dashboard definitions with one governed interface and preventing malformed events at the source.

Squarespace — Senior Software Engineer

2020-2022 · Remote

- Built a unified cloud analytics platform across Squarespace products. Designed a canonical wide customer model, ETL/ELT pipelines, and reconciliation against legacy reporting so most analytics could use one documented surface with minimal joins.

Earlier: **Wanderjaunt** — Senior Software Engineer (2019-2020) · **Facebook (Meta)** — Data Engineer, IC6 (2018-2019) ·

Indeed — Senior Data Engineer (2018) · **StockX** — Data Engineer Team Lead (2017-2018).

PROJECTS

Sen + Agora — private financial infrastructure for people and AI agents

Solidity, Rust arkworks, Circom, TypeScript, Hono, React Native · [live Sen demo](#) · [Sen pitch video](#) · [architecture walkthrough](#) · [Agora GitHub](#)

- Sen is a live Tempo testnet private-payments UX with deployed stablecoin, shielded-pool, and membership contracts. The underlying privacy system uses 2-in/2-out UTXOs, Poseidon Merkle membership proofs, nullifiers, ERC-5564 stealth addresses, and Rust arkworks proofs (~286ms generation, ~246k gas verification), backed by 161 Foundry tests plus Certora and Halmos checks.
- Agora packages private commerce for agents: one planner over ERC-5564 stealth payments or Railgun shielding, encrypted XChaCha20-Poly1305 receipts, and an 82,510-constraint EdDSA-signed Groth16 circuit for anonymous loyalty proofs. Won 3rd place in The Synthesis "Agents that keep secrets" track.

- Deployed three contracts on Arbitrum mainnet with a recorded proof verification (~326k gas) and live stealth/Railgun transactions. Verified with 63 TypeScript tests, 9 Foundry tests, 128k-call invariant fuzzing, 6 Halmos proofs, and 10 adversarial circuit tests. Designed and shipped with Claude Code as the implementation harness; the threat model and verification gates stayed explicit.

Hyperstitch (Rubick) — non-custodial AI-assisted trading, live on Hyperliquid mainnet

Go, DBOS, TypeScript, Effect, Python, DuckDB/DuckLake, Postgres, Pulumi/AWS · [rubick.fi](#)

- Solo five-repository build (~1,580 commits): an LLM pipeline compresses posts from ~1,500 accounts plus on-chain fills into per-asset consensus, while trade intents execute as durable 14-state sagas with crash-recovery replay and exchange reconciliation.
- Designed custody boundaries so the analytics plane holds no keys and cannot trade; the execution engine receives only a delegated agent key behind an AWS KMS envelope keystore and cannot move user funds.

Lum — spatial IDE for supervising parallel coding agents

TypeScript, Rust, Tauri v2, React, Effect, tldraw, QEMU/HVF, E2B · [private demo available](#)

- Runs agents as threads on a spatial canvas, each in its own microVM sandbox with per-thread version control. Structured agent cards expose phase, todos, and permission state; the terminal is a drill-in rather than the primary supervision surface.
- Provider boundary spans local QEMU microVMs and cloud Firecracker sandboxes; pause/resume recovers through native reconnect, checkpoint restore, canonical rehydration, or clean restart.

EDUCATION

University of Texas at Austin — B.S., Computer Science

Georgia Institute of Technology — Online M.S., Computer Science (20 credit hours completed)

TECHNICAL

Languages	Python, TypeScript, Go, Rust, SQL, Solidity
AI & Agents	MCP, DSPy, Claude Code, Codex, agent orchestration, tool routing, sandboxed execution, retrieval evaluation, Optuna, MLflow
Financial Systems	distributed systems, payments, event-driven APIs, durable workflows, ZK proofs, on-chain settlement, non-custodial architecture, privacy engineering
Platforms & Data	Temporal, Kafka, Kubernetes, Docker, AWS, GCP, Snowflake, BigQuery, ClickHouse, DuckDB, dbt, Postgres, Redis