## **Nolan Aguirre**

**Introduction** Full-stack systems engineer from Austin, TX.

Specializes in modular, composable architectures with deep experience across backend, infrastructure, and frontend.

Proven track record of building secure, high-scale, multi-tenant platforms from the ground up.

Thrive in early-stage environments by breaking ambiguity into core problems and delivering flexible, evolving systems

Languages & Tools: JavaScript, SQL, Shell, TypeScript, Python, Solidity, OCaml, HTML, CSS

**Frameworks & APIs:** React, GraphQL, REST, WebSockets, UDP **Databases:** PostgreSQL, SQLite, MongoDB, memcached

Infra & DevOps: AWS, Linux, Git, Heroku, DNS, SSH, Unix user permissions, Terraform, Docker

**Security:** OAuth2, JWT, field-level encryption, RBAC, SSH

**Blockchain:** Ethereum, Tezos, Aptos

## Experience

Co-founder, JNLabs May 2024 — May 2025

Formed to identify and test early-stage product opportunities in the AI space.

- Collaborate closely with founders to identify and strategize AI-driven market opportunities, focusing on product discovery and user engagement.
- Rapidly prototype and launch AI projects to assess real-world user interest, enabling data-driven insights and informed product decisions.
- Oversee and execute essential tech operations for seamless company functionality, ensuring efficient project delivery and performance.
- Developed AIPOP, a Nodejs based AI music generation app for the Taiwanese market, integrated within LINE, providing unique, accessible music experiences.
- Initiated viability testing for an AI-powered front desk tool designed to optimize operations within auto shops, enhancing service efficiency and customer interaction.

## Founding engineer, Vertalo

April 2019 — July 2025

Fintech platform for private asset management; 100k+ investors in SEC-regulated private securities.

- Led architecture and implementation of a secure, multi-tenant financial platform spanning backend, frontend, infrastructure, and blockchain integration
- Built a modular system around a double-entry ledger with full audit tracking (who, when, what), powering all state transitions and financial events
- Designed a general-purpose event queue with ordered, replayable, write-once semantics; paired with an event reconciliation system to safely convert external triggers (e.g., account claim tokens, blockchain actions) into inplatform effects
- Developed role-based APIs for investors, asset managers, administrators, ATS platforms, and agents; enabled interrole sharing and RBAC tiering (viewer/admin/owner) across all surfaces
- Built a graph-based onboarding engine with reusable qualifications, OR-logic prerequisites, single-use gating, and permanager schema-driven form customization
- Integrated with third-party platforms using OAuth and client-provided API keys, including DocuSign, North Capital, Coinbase, Netki (KYC) and Investready(AML)
- Deployed smart contracts in Solidity (Ethereum) and OCaml (Tezos); built a 500M+ record Ethereum block indexer and versioned parser system for contract data
- Operate per-developer environments, a sandbox, and two test in house test frameworks.
- Implemented field-level encryption, soft-delete policies, full historical audit logging, a built-in dead letter queue with human alerting, and automated schema migration via Sqitch
- Built internal tooling for logging, notification dispatch, email alerts, admin overrides, and multi-db sync (core system 

  → blockchain)

## Software Developer, Fun 2 Learn Code

*April 2017 — March 2019* 

K-12 summer and after school classes teaching kids how to type, program and make games.

- Instructor: Lead classes of 4-10 on various programming topics, and provide 1-on-1 tutoring.
- Curriculum writer: Write programs in various language and document step by step instructions.
- App developer: Create in house tools in Java to improve accessibility of classes, including a GUI based minecraft
  modding tool with supporting Nodejs services.
- Wiki Gardener: manage migration of curriculum from paper to digital through Github.