

EXPERIENCE

Backend Developer (Blockchain Systems) | RebelFi – United States | Jun 2024 – Jan 2026

Rust · Solana · Anchor · Smart Contracts · NestJS · TypeScript · PostgreSQL · MikroORM

🏆 **Winner – PayPal PYUSD Hackathon** (ZeroCut project at RebelFi) - [X Post](#)

- Core contributor to the winning project, working directly with the founder on system design and technical implementation.

Execution & Transaction Workflows

- Implemented a multi-stage transaction state machine (Authorize → Execute → Finalize/Cancel) that enforced idempotent execution and eliminated duplicate withdrawals under retry and async confirmation scenarios.
- Implemented event-driven transaction orchestration that formalized deposit and withdrawal lifecycles, preventing stuck or orphaned transactions across asynchronous blockchain events.

Financial & System Architecture

- Replaced ad-hoc balance tracking with a double-entry accounting system that enforced deterministic reconciliation between off-chain balances and on-chain vault state, eliminating prior accounting inconsistencies.

Security & Authority Separation

- Implemented a non-custodial vault architecture separating ownership, accounting, and execution roles, allowing automated services to operate without private key access while maintaining full on-chain fund control.
- Enforced least-privilege authority separation using PDA-managed roles (Admin, Automation, Application), eliminating single-key dependency risks.
- Built KYC/KYB workflow integrations and internal compliance tooling.

DeFi & Yield Architecture

- Automated yield allocation and fund migration workflows across multiple providers, replacing manual operational processes and reducing human error in capital rebalancing.
- Integrated external DeFi protocols via CPI with PDA signing, enabling automated yield generation while preserving non-custodial vault guarantees.

Testing

- Established local Solana and EVM testing environments with mocked tokens and contracts, enabling deterministic testing of accounting invariants and transaction workflows using Jest.

Full Stack Developer (Internship) | Silver Brain AI AG – Switzerland | Oct 2023 – Mar 2024

Next.js · Django · TypeScript · Python · PostgreSQL · Redux · Stripe

- Led frontend development across multiple production projects, coordinating architecture and implementation across the team.
- Designed and implemented backend APIs to support vector search, file ingestion, and user workflows, ensuring efficient data processing and secure access.
- Designed and implemented user onboarding flows, improving user activation and UX.
- Built payment flows and integrations with Stripe, including address auto-completion using Google Places.
- Implemented vector search pipelines for document formats (.pdf, .doc, .pptx).

SKILLS

Backend & Systems: Rust · TypeScript · NestJS · PostgreSQL · Event-Driven Architecture · Accounting Systems · State Machines

Blockchain: Solana · Anchor · Smart Contracts · CPI · PDA · Vault Architecture · EVM

Infrastructure & Tooling: Docker · Redis · AWS · Linux · Git · Jest

EDUCATION

Universidad del Aconcagua - Bachelor's in Computer Science (1 year completed)

Languages: English - C1, [EF SET \(English Test\) - C1](#) | Spanish - Native.