Alec DiFederico

Backend engineer specializing in blockchain protocols across the EVM and SVM, data pipelines, and high-performance systems at early-stage startups

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EXPERIENCE

Kiosk, New York City *June 2024 - June 2025*
Senior Backend and Smart Contract Developer

- Designed and implemented real-time blockchain data indexing pipelines using Kafka and Debezium
- Developed TypeScript GraphQL APIs and optimized Postgres queries for a novel NFT Farcaster client
- Architected EVM smart contracts for *today.fun*, implementing onchain token distribution mechanisms
- Built production AI-agent pipelines using Pydantic AI for content ingestion and recommendations

ReNFT Labs, Remote *June 2023 - June 2024*
Senior Smart Contract Developer

- Designed and implemented *Endgame*, a collateral-free NFT rental protocol on the EVM
- Forked and modified the optimized OpenSea Seaport protocol contract to integrate with *Endgame*
- Led the *Endgame* smart contracts through a 3-week auditing process with Code4rena
- Designed and implemented a pump.fun-inspired bonding curve protocol on Solana called *coin.fun*
- Built out TypeScript and Python GraphQL APIs to serve smart contract interactions

Greenwood Labs, Remote *June 2021 - April 2023*
Solidity Smart Contract/Backend Engineer

- Built the first Ethereum borrowing aggregator that served over 3MM in crypto loans for 2000+ borrowers
- Designed a novel fractional ownership protocol of DeFi trades that attracted over 50k USD in deposits
- Built wealth management multi-sig wallet using Gnosis Safe contracts and vault-style structured products
- Used Monte Carlo simulations to research financial product viability with Jupyter/Python/Pandas
- Led the architecture of Node.js REST APIs using Express, TypeScript, Postgres, and Docker

PROJECTS

Solana High Frequency Trading Engine *Oct 2024 - Present*
Metrics: $500k volume traded · 150µs p99 tick-to-trade · 10% zero-slot misses

- Architected a sub-150µs tick-to-trade, high frequency trading engine in Rust
- Built real-time data indexing pipelines by interfacing directly with Solana's gRPC and shred streams
- Built a custom shred ingestion pipeline that received shreds 7-10ms faster than the standard decoding
- Implemented multi-path transaction routing through tip providers and direct-to-leader submission
- Profiled using Honeycomb telemetry and flamegraphs to optimize critical hot paths

SKILLS

Programming Languages: TypeScript, Rust, Solidity, Python
Data Infrastructure: Postgres, Redis, Kafka/Redpanda, Debezium, Datadog
Smart Contract Frameworks: Foundry (EVM), Anchor (SVM)

EDUCATION

Northeastern University, Boston, MA May 2021
Bachelor of Science in Computer Science