CAMERON KRUGER

Chicago, IL · Open to relocation | cameron.r.kruger@gmail.com | ckruger.xyz | github.com/0xckruger

Software engineer with four years in production HFT across market data, pricing publication, order management, and exchange integration, plus Rust work on on-chain execution and exchange market data.

EXPERIENCE

IMC Trading | Trading Software Engineer, Delta One / ETF *Aug 2022 – Present*

Chicago, IL · Java 17+, Rust, Python

- Cut noisy valuation traffic to trading engines by **60%**, improving wire-to-wire times by replacing static channel configuration with an asynchronous **ZooKeeper service discovery engine** that resolves subscriptions from live engine message flow.
- Owned the desk's **order management system** for real-time trade reconciliation and risk-system integration, adding CFE, BrokerTec, and Bloomberg EMSX venue support across three asset classes.
- Fully integrated a **new overnight US equity venue**, extending equity trading hours into a 7pm to 3am session across the entire trading system, including new market data feed and order sessions, enabling nearly 24hr/day trading for our systems.
- Expanded the universe of derivatives the desk trades to support **NAV, SOQ, and other Trade At Settlement products** in our Java backend for a new ATS, opening interest-rate strategies the desk could not run before.
- Rebuilt the desk's **equity valuation publishing layer**, replacing legacy multi-linear-regression publishers with a modular, multi-algorithm **C++ publisher** producing valuations that are easier for traders to configure based on their needs.
- Took a chat-based **reporting application** from idea to company-wide adoption, building a Flask-based Python backend and JavaScript frontend and continuing to add requested features; now an established workflow across every office in 5 countries.
- Automated an operationally intensive intraday **closing-auction imbalance (NOII) strategy** in Python, cutting execution time by roughly **70%** and saving thousands of dollars a month in hardware and exchange session costs.
- Built **Serval**, a Rust service that pulls JVM telemetry from production trading processes into ClickHouse and alerts through Grafana on problematic behavior. Now the desk's primary tool for finding blocked threads, heap exhaustion, inefficient code paths, and CPU or file-descriptor saturation.

Nethermind | Software Engineer & Research Intern *Dec 2021 – Mar 2022*

Remote · Go, Solidity

- Contributed to a **Starknet L2 client written in Go** alongside Nethermind engineers, working in open-source Ethereum infrastructure.
- Built and open-sourced real-time **on-chain security monitoring agents** for DeFi protocols, securing over **$500MM** for users, using custom pattern matching to flag suspicious transactions as they hit the chain.

PROJECTS

cex-streamer | Rust · github.com/0xckruger/cex-streamer

- Config-driven market data service in **Rust** subscribing to exchange WebSocket feeds and publishing normalized best bid and offer updates to Redis streams concurrently with Tokio.

Arbiter | Rust, Solidity · github.com/0xckruger/arbiter_v2 *In development*

- Multi-chain arbitrage bot in **Rust** for EVM L2s (Base, Arbitrum, Linea) built on Alloy, with DEX protocol decoders, market data and opportunity detection, transaction building, flash loan providers, and an execution engine.
- Solidity contracts with Foundry fork testing and benchmarks, targeting Revm and modern Rust Ethereum tooling.

TECHNICAL SKILLS

Languages: Rust, Java 17+, Python, Go, C/C++, Solidity, SQL, Bash

Trading systems: Venue and exchange integration, market data and depth-of-book feeds, valuation and pricing publication, order management, trade reconciliation, risk-system integration, CLOB microstructure, closing-auction and imbalance strategies, multicast pub/sub, FPGA integration

Crypto: EVM, SVM and Anchor, Revm, alloy-rs, Foundry and Anvil, web3.js, Geth, DEX protocol decoding, flash loans, exchange WebSocket and RPC integration

Infrastructure: ClickHouse, Redis, Kafka, ZooKeeper, Grafana, Docker, MySQL, MongoDB, JVM and bare-metal Linux tuning

EDUCATION

George Mason University | B.S. Computer Science, magna cum laude, GPA 3.82 / 4.00 *May 2022*