# Cameron Kruger

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Systems software engineer with expertise in low-latency and distributed trading systems. Specialized in ultra-low-latency software and infrastructure, high-throughput networking, and PnL-critical market microstructure. Experience spans traditional finance HFT and Web3, with strong focus in Rust, Python, and Java in resource-constrained environments.

## EDUCATION

**Bachelor of Science (B.S.) - Computer Science** May 2022
*George Mason University, Fairfax, Virginia*
- Honors: Magna cum laude (GPA: 3.82/4)

## EXPERIENCE

**Trading Software Engineer** August 2022 – Current

*IMC Trading, Chicago, IL*
- Architected and improved **ultra-low-latency distributed trading systems** for ETF and Delta One strategies, with focus on message optimization and system modernization
- Built trading critical, fault-tolerant service discovery system using Apache ZooKeeper in Java, implementing custom multicast pub/sub system that **reduced network overhead by >50%** and improved strategy execution times
- Developed concurrent **log parser in Rust** for performance-critical log analysis tooling, **achieving 8x process speedup** for diagnosing proprietary trading system issues
- **Automated operationally intensive intraday strategy** with outsized PnL impact on desk with Python based platform; improved execution speed by ~%70 and **saving over 100kpm**

**Software Engineer and Research Intern** December 2021 – March 2022
*Nethermind, Remote*
- Worked closely with Nethermind and other partners in developing open-source software for the Ethereum ecosystem
- Engineered real-time **security monitoring agents** for DeFi protocols in Typescript, including a **$500MM DeFi platform**, implementing custom pattern matching algorithms for detecting suspicious on-chain transactions
- Contributed to specialized Python mempool analysis tools that identified **profitable MEV arbitrage opportunities** across multiple DEXs/lending protocols
- Studied cutting-edge research in the smart contract, MEV, and DeFi space

**Software Engineer Internship** May 2021 – August 2021
*Walmart Global Tech, Bentonville, Arkansas/Remote*
- Created a **concurrent API in Go** that performed data analysis and JSON processing, delivered to a user-friendly front end with the use of internal APIs and MongoDB
- Planned, developed, and shipped a production web application within 8 weeks

## SKILLS

Programming: Rust, Go, Java 17+, async/concurrent Python, Bash, x86 architecture
Blockchain Programming/Libraries: EVM, Solidity, SVM, Anchor, Web3.js, websockets
Infrastructure: Baremetal Linux tuning, Bash, RF networking, multicast, FPGA integration
Technologies: MySQL, MongoDB, Flask, Apache ZooKeeper, Kafka, FIX protocol