Ethan Havemann

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EDUCATION

Northwestern University   Evanston, IL
B.S. in Computer Engineering   *Expected June 2025*
- Minor in Mathematics; Residential Assistant ('22-'25); GPA: 3.9/4.0; Major GPA: 4.0/4.0.
- Relevant Coursework: Operating Systems, Distributed Systems, (Advanced) Computer Architecture, CUDA, Compiler Construction, Computer Networks, Embedded Systems, Data Structures, Statistical Learning

EXPERIENCE

Optiver   Summer 2025
Software Engineer - High Frequency Trading   *Austin, TX*

Optiver   June 2024 – August 2024
Software Engineering Intern - High Frequency Trading Execution   *Austin, TX*
- Rebuilt simulation environment for new auto-trader in C++, replaying all data feeds and supporting systems.
- Designed and implemented tooling to allow simulation without requiring quantity limited FPGAs, while maintaining competitive accuracy with production environment and improved visibility into trading state.
- Designed and implemented out of band latency analysis tooling to enable reproducible, consistent, and accurate performance profiling and optimization.

Amazon Web Services (AWS)   June 2023 – August 2023
Software Engineering Intern – Screening Services   *Seattle, WA*
- Designed and implemented fully automated screening and case lifecycle management pipeline using Java and AWS.
- Built novel system consuming JSON to dynamically create business rules, configured to consume from a prebaked UI for non-technical consumers. Worked extensively with other teams to resolve blockers and interteam issues.
- Automated case maintenance actions within the US, removing over 10,000 human interventions per month.

Amazon   September 2022 – December 2022
Software Engineering Intern – Advertising Data Compute Orchestration Team   *Boulder, CO*
- Refactored existing job runner to allow reporting of metrics as well and make design more extensible, develop automatic monitoring microservice for internal EMR fork, surfacing metrics for 250M+ daily spark jobs.

Acorn Genetics – Genetic Testing Startup   May 2022 – September 2022
Software Engineer Intern   *Evanston, IL*
- Lead on Acorn's SANDY genetic processing library (Python), maintaining feature parity to industry leader.

Northwestern University   September 2023 – Present
Teaching Assistant, Guest Lecturer   *Evanston, IL*
- Teaching Assistant for Computer Science 213 - Intro Computer Systems (Fall 2023, Winter, Spring 2024)
- Teaching Assistant for Computer Science 343 - Operating Systems (Fall 2024)
- Teaching Assistant + Guest Lecturer for Industrial Engineering 304 - Statistical Learning (Winter, Spring 2024

PROJECTS

Northwestern Financial Technologies Club | *Founder, President*   January 2022 – Present
- Built Northwestern's only quant finance organization from 1 member to 500+ applicants/year.
- Designed education and technical projects for 3 cohorts of members, gave 30+ lectures on trading and software.

Walkway - EE/CS 499 | *Independent Study*   March 2022 - Present
- Graduate Study advised by Professors Ilya Mikhelson and Zhaoran Wang on applied RL in Crypto Futures.
- Built in-house research platform, 3 distributed autotraders, and deployment and monitoring systems.

HONORS AND AWARDS

2023 UChicago Trading Contest | *Team Lead, 3rd Place Market Making, 5th Place Portfolio Optimization*

TECHNICAL SKILLS

Programming Languages: C++, Python, C, Java, Go, R, Verilog, Typescript, Bash, LaTeX
Technologies: UNIX (RHEL), Cloud Infrastructure, APIs, Concurrency, Data Systems
Developer Tools: Git, GitHub + Actions, Jenkins, SSH, Terraform, Ansible, Cloud Platforms, Wireshark, GDB