

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: 3.85/4.00; Major GPA: 4.00/4.00.
- Relevant Coursework: Operating Systems, Distributed Systems, (Advanced) Computer Architecture, Compiler Construction, Computer Networks, Data Structures, Statistical Learning, Stochastic Processes

EXPERIENCE

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 – People Screening

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 and President*

January 2022 – Present

- Steer technical and programmatic direction of organization, giving lectures on various relevant topics, overseeing development projects, and providing mentorship and advice for 30+ student developers.
- Conceptualized and assisted with infrastructure design and case direction on the Northwestern Trading Contest.

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, data pipelines, cloud agnostic deployment code, and feature extraction engines.

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/Rocky, Ubuntu), Cloud Infrastructure, APIs, Concurrency, Data Systems

Developer Tools: Git, GitHub + Actions, Jenkins, SSH, Terraform, Ansible, Cloud Platforms, Wireshark, GDB