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 – Present
Software Engineering Intern - High Frequency Trading Execution — *Austin, TX*
- Built, with C and C++, a reproducible distributed latency evaluation system for new auto trading applications.
- Designed and implemented (C) low latency FPGA mocks to reduce development reliance on limited hardware.

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.
- Worked extensively with Java, AWS EMR, Lambda, SNS, EC2, and DynamoDB to make team's product more lightweight, implemented prototype release pipeline to make adoption orders of magnitude cheaper and faster.

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*
- Undergraduate Teaching Assistant for Computer Science 213 - Intro Computer Systems (Fall 2023, Winter, Spring 2024), and Industrial Engineering 304 - Statistical Learning (Winter 2024).

PROJECTS

Northwestern Financial Technologies Club | *Founder and President* — January 2022 – Present
- Lead/Principal Engineer for 30+ student developers across 6 teams, building everything from backtesting engines and contest exchanges to distributed trading games and over-engineered websites.
- Steer technical and programmatic direction of organization, implementing faculty lectures, alumni interaction, optimization and prediction competitions, firm visits, and more to improve awareness of quantitative finance.
- Work with team leaders, faculty, and career office to build cases and systems for future NU 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*
TXSEF | *State Finalist; Project: Microcontroller Powered (Go) Consumer-Scale Martian Biosphere*

TECHNICAL SKILLS

Programming Languages: Python, C++, Go, Java, R, Verilog, Typescript, C, Bash, LaTeX
Technologies: UNIX (RHEL/Rocky, Ubuntu), Cloud Infrastructure, APIs, Concurrency, Data Systems
Developer Tools: Git, GitHub + Actions, SSH, Terraform, Ansible, Cloud Platforms, Valgrind, (Neo)Vim, TMUX