

# 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-Present); GPA: 3.8/4.0; Major GPA: 4.0/4.0.
- Relevant Coursework: Computer Networks, Computer Architecture, Advanced Computer Architecture, Intro Computer Systems, Data Structures, Statistics, Statistical Learning, Stochastic Processes, Digital Design

## EXPERIENCE

### Incoming Software Engineering Intern

June 2024 – August 2024

*Optiver*

*Austin, TX*

### Software Engineering Intern

June 2023 – August 2023

*Amazon Web Services (AWS) – People Screening Team*

*Seattle, WA*

- Designed and implemented fully automated screening and case lifecycle management pipeline.
- Completed intended project + stretch goals in just under 7/12 weeks. Built novel system consuming JSON to dynamically create business rules, configured to consume from a prebaked UI for non-technical consumers.
- Migrated team's core API to be entirely 1P and serverless, configured CI/CD to remove manual deployments.

### Software Engineering Intern

September 2022 – December 2022

*Amazon – 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.
- Served as domain expert in team development setup, served as onboarding buddy for SDE and TPM in November.

### Software Engineering Intern

May 2022 – September 2022

*Acorn Genetics – Genetic Testing Startup*

*Evanston, IL*

- Lead on Acorn's SANDY genetic processing library (Python), maintaining feature parity to industry leader.

### Teaching Assistant

September 2023 – Present

*Northwestern University*

*Evanston, IL*

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

- Graduate Study advised by Professors Ilya Mikhelson and Zhaoran Wang on applied RL in Crypto Futures.
- Built heavily parallelized feature extraction scripts, binding C++ into Python for 100x+ speedups.

## HONORS AND AWARDS

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

**Correlation One Terminal Algorithm Contest** | *Season 8 Top 100 Global, Peak Rank 20*

**TXSEF** | *State Finalist; Project: Microcontroller Powered (Go) Consumer-Scale Martian Biosphere*

## TECHNICAL SKILLS

**Programming Languages:** Python, C++, Java, R, Verilog, Typescript, C, Bash,  $\LaTeX$

**Technologies:** UNIX, Ubuntu, Google Jax, Pybind11, Pandas, Pola.rs, NumPy, JUnit, Mockito, Dagger, Poetry

**Developer Tools:** Git, GitHub + Actions, Remote Development, AWS, GCP, (Neo)Vim, IntelliJ, CLion, Postman