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, Winter 2024), 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