

EDUCATION

University of Delaware

Newark, DE

Bachelors in Mathematics and Computer Science (GPA: 3.9/4.0)

Aug. 2021 - May 2025

- Relevant CS Coursework: Grad Machine Learning, Grad Artificial Intelligence, Parallel Programming, Algorithms
- Relevant Math Coursework: Grad Linear Algebra, Grad Combinatorics, Grad Spectral Graph Theory, Grad Analysis (I & II), Grad Algebra (I & II), Grad Probability, Grad Stochastic Processes, PDEs, ODEs, Calculus I-III

EXPERIENCE

Chatham Financial

Kennett Square, PA

Software Engineering & Quantitative Research Intern

Jun. 2024 - Aug. 2024

- Utilized Pytorch graph convolutional networks to predict aggregate exposure curves of correlated assets, achieving 20% higher accuracy than baseline methods.
- Learned advanced portfolio theory under senior quantitative researchers, and explored asset pricing technology.
- Helped lead a team of software development interns to develop a manual valuation loading web app for assets, which facilitates around 10,000 valuations monthly.
- Migrated a Python notebook which created custom forward curves given market data to the web using Python Sanic.

University of Delaware

Newark, DE

Research Assistant

Feb. 2024 - Jun. 2024

- Experimented with Pytorch ResNets to create seafloor mappings in collaboration with the US Department of Defense.

Chatham Financial

Kennett Square, PA

Software Engineering Intern

Dec. 2023 - Feb. 2024

- With a full-time team of engineers and designers, engineered portfolio management tools to service 60-100 billion dollar AUM portfolios for clients such as Blackstone, JPMC, Apollo, etc.
- Created several React apps, which altogether allowed the onboarding of dozens of funds through excel import.
- Established CI/CD pipelines for a new project ensuring secure and reliable deployment using Nomad and Consul.
- Planned and implemented backend logic for the standardization of around 100,000 asset records using .NET.

Chatham Financial

Kennett Square, PA

Software Engineering Intern

Jun. 2023 - Aug. 2023

- Developed a web tool facilitating PDF upload, preview, and editing, used by thousands of internal users and clients.
- Revitalized a .NET document processing backend through enabling a 10x increase in blob transfer bandwidth by redefining Nomad Containers.
- Diagnosed and eliminated 5+ internal cross-service errors by leveraging T-SQL queries, and Graylog.

University of Delaware

Newark, DE

Research Assistant

Mar. 2023 - Jun. 2023

- Implemented a full stack PoC web page funded by \$90,000 NOAA grant to aid American farmers and surveyors by modeling fertilizer runoff risk.
- Created XGBoost models, and established CI/CD processes to run them on the AWS cloud, allowing about a 20% decrease in model inference time.

HONORS AND AWARDS

- Best Educational Hack (1st Prize) at HenHacks 2023 (University of Delaware)
- Top 8 Overall Hack & Wolfram Research Award at PennApps24 (University of Pennsylvania)

SKILLS

- Languages: Python, C++, TypeScript, C#, SQL, Bash
- Frameworks / Libraries: NumPy, scikit-learn, Torch, Tensorflow, Angular, React, .NET, Sveltekit
- Technologies: Git, Docker, Linux, AWS, Azure, GitLab, HashiCorp Nomad