

## EDUCATION

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### University of Chicago | M.S. in Statistics | September 2023 – May 2025 (Present)

Leads M.S. class in total coursework completed. Also planning to complete course requirements for Applied Math M.S.  
Completed Ph.D.-level sequences in theoretical statistics, applied statistics, and probability

### University of California, Berkeley | B.S. in Electrical Engineering and Computer Science | Graduated 2023

Minors in Mechanical Engineering and Data Science

## EXPERIENCE

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### Data Science & ML Researcher at UChicago (planning to submit projects for publication this year)

*Spring 2024 - Present*

- Quantifying the role of sharpness on generalization in width-varying two-layer neural networks using theoretical bounds and experiments | [Repo](#)
- Solving for the dynamic interaction between statistical predictive models and markets betting on the same outcome
- Strategies for improving the calibration of LLMs on forecasting current events, including debiasing of latent representations and incorporation of proper scoring, supervised by Aaron Schein | [Repo](#)

### Data Science Intern at Visimo.ai

*Summer 2023*

- Deployed YOLO model for video object segmentation in internal R&D project, results were demoed to potential clients
- Developed and implemented novel application of self-supervised training for contracted deep learning project
- Performed comprehensive publications review on SOTA methods for LLM fine-tuning in jargon-heavy domains

### Data Science & Analytics Intern at TransUnion – Model Governance Team

*Summer 2022*

- Built data analytics dashboard to monitor millions of model outputs and automatically detect distribution shifts
- Researched historic distribution shifts to contextualize them in macroeconomic trends and assess significance to the company
- Used Spark to write an API to help 100+ coworkers access and alter databases

### Data Science & Cognitive Science Teaching Assistant at UChicago

*Fall 2024 & Winter 2025*

- Data 27100: Capstone project course for data science majors. Managed teams working on a physics emulator for Fermilab and a RAG chatbot for an environmental nonprofit
- CogSci 20002: Taught coding and mathematical modeling in the context of neuroscience, psychology, and linguistics

## LEADERSHIP & ORGANIZATIONS

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### President, Project Manager at Political Computer Science

*2019-2023*

- As president oversaw 11 projects, new member recruitment, and social events. Increased member retention by over 50%
- PM for university-wide scientific poll to gather and dissect data on student sentiment. Also investigated use of social media ads by the 2020 presidential candidates, created NLP model to detect polarized speech

### Project Manager at Sports Analytics Group at Berkeley

*2019-2023*

- PM for team using ML to develop new metrics and write reports offering strategy advice for Berkeley's baseball team
- Worked with the Denver Nuggets to quantify "brand health" through social media activity, other market data

### Engineers Without Borders

*2019-2023*

- Compiled sanitation and health data for reports to national office for a team that implemented water pipelines in Panama

## PROJECTS, SKILLS, & MISC.

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- **Languages:** Advanced in Python, also strong in R, Java, C, SQL | **Tools:** Tableau, Solidworks, Git, Slurm
- **Libraries:** PyTorch, Jax, Pandas, Numpy, SciKit-Learn, Matplotlib, Plotly & Dash, Shiny, Weights & Biases, PyMC3, Penzai, SciPy, LightGBM & xgboost, beautifulsoup
- **Open Source:** Submitted [PR](#) to X/Twitter Community Notes repo lowering model loss by 10% and catching bug
- **Graduate Course Projects:** Literature [review and extension](#) on info theory for predictions markets; [Review and implementation](#) on the loss landscape complexity of phase retrieval; A [model](#) to estimate scaling laws from compute market data; [Review](#) on dynamical systems for stable RNN training
- **Personal Projects:** Programming, simulating, and solving the card-based word game Quiddler; Experimenting with algorithmic stock trading; 3D Printing objects for everyday use at home
- Private math tutor for elementary, middle, and high school students
- Attended NeurIPS, ACM Economics & Computation, and SIAM Mathematics of Data Science conferences
- Counselor at two-month overnight summer camp Hess Kramer (Summers 2019 and 2021)