Ian Joffe

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EDUCATION

University of Chicago | *September 2023 – May 2025*
M.S. student in Statistics
Completed Ph.D.-level sequence in applied statistics, enrolled in Ph.D.-level sequences in theoretical statistics and probability
Leads M.S. class in total coursework completed. Also planning to complete course requirements for Applied Math M.S.
Current research projects (aiming for submission for publication this year): *Summer 2024 - Present*
- Quantifying the role of decreased sharpness on improved generalization capabilities of wider two-layer neural networks using theoretical bounds and experiments, supervised by Zhiyuan Li | 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, intended for thesis | Repo

T.A. for Data 27100, UChicago's capstone project course for undergraduate data science majors *Fall 2024*

University of California, Berkeley | *Graduated 2023*
B.S. in Electrical Engineering and Computer Science, Minors in Mechanical Engineering and Data Science

INTERNSHIPS

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 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 model outputs and automatically detect distribution shifts
- Researched historic output distributions and their shifts to contextualize them in macroeconomic trends and current events, and determine their significance to the company
- Used Spark to write an API to help coworkers access and alter databases

UNDERGRADUATE ORGANIZATIONS & LEADERSHIP

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 differing use of social media ads by the 2020 Presidential Primary candidates, created NLP model to detect politically polarized speech

Project Manager at Sports Analytics Group at Berkeley *2019-2023*
- Used machine learning to develop new statistics and wrote reports offering in-game strategy advice for the Berkeley baseball team – two semesters as Cal Baseball PM
- Worked with the Denver Nuggets on project to quantify "brand health" through social media activity, other market data

Engineers Without Borders *2019-2023*
- Joined team that developed, designed, and implemented water distribution system in Panama
- Compiled water quality and health data for a report to national organization office

PROJECTS, SKILLS, & MISC.

- **Languages**: Advanced in Python, also strong in R, Java, C, SQL | **Libraries**: Pandas, Numpy, Matplotlib, Plotly & Dash, Shiny, SciPy, SciKit-Learn, LightGBM & xgboost, PyMC3, PyTorch, Jax, Penzai | **Tools**: Tableau, Solidworks, Git, Slurm
- **Graduate Course Projects**: Literature review and extension on info theory for predictions markets; Review and implementation on the loss landscape complexity of phase retrieval; 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 and ACM Economics & Computation conferences, SIAM Mathematics of Data Science this October
- Counselor at two-month overnight summer camp Hess Kramer (Summers 2019 and 2021)