

## Education

### Harvard University

Cambridge, MA

Bachelor of Arts, Mathematics and Computer Science (GPA: **4.00**)

May 2028

Relevant Coursework: Studies in Algebra and Group Theory (Math 55), Studies in Real and Complex Analysis, Data Structures and Algorithms, Theoretical Computer Science, Probability, Statistical Inference, Machine Learning

Activities: Harvard Undergrad Machine Intelligence Club, Tech for Social Good, Harvard Ventures, Harvard Dharma(Board), Directed Reading Program(Additive Combinatorics), Harvard Chess

### South Brunswick High School

South Brunswick, NJ

High School Diploma, Valedictorian (Rank 1/750)

June 2024

NJ Math Olympiad State Champion, 5x American Invitational Mathematics Examination, Stanford University Math Camp

Princeton University Dual Enrollment: Multivariable Analysis, Measure Theory, Topology, Fourier Series

## Experience

### Fortune 500 Company

Cambridge, MA

#### Harvard Data Analytics Group Analyst

September 2024 - Current

Developing machine learning solutions using pytorch and statsmodels to improve the conversion rate of a rewards program for a large retailer by highlighting potential targets for advertisements.

### Computational Science and Engineering Lab at Harvard

Cambridge, MA

#### Machine Learning Researcher

October 2024 -

Current

Developing methods for guiding generative video models to learn physical dynamics for fluid flow. Utilizing numerical and high-performance computing methods for complex nonlinear differential equations. Advised by Professor Koumoutsakos.

### Kreiman Lab at Harvard Medical School and Boston Children's Hospital

Boston, MA

#### Machine Learning Researcher

October 2024 - Current

Utilizing biological data to identify differences in visual search mechanisms used by deep vision models and biological vision models. Improving AI architectures by increasing biological plausibility. Advised by Professor Kreiman.

## Leadership

### Harvard Undergraduate Mathematics Association

Cambridge, MA

#### Sponsorship Chair

November 2024 - Current

Co-organize and execute monthly academic and social events for math-interested undergraduates at Harvard. Coordinate communications with financial sponsors, actively seeking new partnerships and funding opportunities.

## Projects

**Multi-Minesweeper:** Built a real-time multiplayer minesweeper game using Next.js and integrated Google Cloud Firestore for backend data management.

**West Nile Virus Forecasting:** Developed forecasting pipeline by implementing an ensemble of ODE and Transformer models using python and Pytorch. Won \$4000 for a paper on West Nile Virus dynamics.

**ColorChess:** Created a dynamic web application for a unique color chess variant using Next.js, Tailwind CSS, and Shadcn UI components: engaging, fast, and responsive user interface.

## Skills & Interests

**Programming:** Python, Lua, Pytorch, JAX, C++, Java, Pandas, Statsmodels, Sklearn, Numpy, Julia, HTML/CSS/JS, Typescript, React, NextJS, Android Studio

Hobbies: Chess(rated 2300, top 99.8%, on chess.com), Tennis, Poker, Cricket