

## Kevin Lim

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### EDUCATION

#### The University of Chicago

BS/MS Computer Science, BS Mathematics

Chicago, IL

Expected June 2025

**Relevant Coursework:** Abstract Algebra, Advanced Algorithms, Complexity Theory, Computer Architecture, Computer Networks, Computer Systems, Discrete Math, Linear Algebra, Machine Learning, Mathematical Probability, Ordinary Differential Equations, Real Analysis

**Awards:** Putnam Mathematics Contest – Top 25%

### TECHNICAL SKILLS

**Programming Languages:** Python (Django, NumPy, TensorFlow), C, C++, JavaScript (Node.js), R, SQL (MySQL)

**Familiar With:** REST API Architecture, MongoDB, Versioning Control (Git), Networking Protocols (TCP/UDP)

### PROJECTS

#### Hyperparameter Tuning using Bayesian Optimization

Python (NumPy, PyTorch)

- Implemented the Bayesian Optimization algorithm with Gaussian process regression to model the hyperparameter space of a convolutional neural network, allowing for the efficient tuning of hyperparameters with limited training.
- Model performance matched that of a conventionally tuned CNN (grid search, random search) with 3-10x decrease in tuning time.

#### ChiTCP – CMSC 23320 Project

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- Implemented the TCP networking protocol in C, with RFC-compliant executions of socket connections / disconnections, Ethernet/IP header constructions, and retransmissions.
- Utilized multithreading to efficiently handle sending and receiving data while simultaneously keeping track of timeouts from dropped messages.

### WORK EXPERIENCE

#### SIGMA Lab @ UChicago

Research Assistant

Chicago, IL

June 2023 – June 2024

- Designed and implemented optimization algorithms using Python to model strategic interactions between adversarial agents, gaining valuable experience with popular computational frameworks/tools such as NumPy, scikit-learn, PyTorch, and Gurobi.
- Utilized a variety of optimization techniques such as simulated annealing, mixed-integer linear programming, and Bayesian Optimization.

#### UChicago Mathematics Department

Course Assistant

Chicago, IL

September 2023 – March 2024

- Fall 2023: Led tutorial sessions twice weekly for students in MATH 10500 Fundamental Mathematics I at the University of Chicago. Responsibilities included fielding individual questions and administering assessments, as well as grading weekly problem sets.
- Winter 2024: Grader for advanced calculus course MATH 18300 Mathematical Methods in the Physical Sciences I.

#### Steamoji

Facilitator

Vancouver, BC

July 2022 – September 2022

- Led STEM-focused lessons for middle- and high-school students on topics such as mathematics, programming, engineering, and robotics.

### COMMUNITY LEADERSHIP

#### UChicago Badminton Club – Logistics Director

September 2022 – June 2024

- Developed a RESTful API architecture for the club badminton website using Express.js and MongoDB, servicing over 200 members by facilitating court signups.