Andrew Yuan

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EDUCATION

Massachusetts Institute of Technology, Cambridge, MA — Sep. 2023—May 2026
B.S. in Mathematics; B.S. in Computer Science and Engineering
Relevant Coursework: Abstract Algebra I, Real Analysis, Fundamentals of Statistics, Probability & Random Variables, Intro to Machine Learning, Fundamentals of Programming, Linear Algebra, Multivariable Calculus, Macroeconomics

EXPERIENCE

Weride.ai: Incoming Software Engineer Intern — Jun. 2024—Aug. 2024

University of Virginia Biocomplexity Institute: Research Intern — Jun. 2022—Jul. 2023

- Researched networked dynamical systems and combinatorial optimization on multi-agent networks.
- Proved expected performance bounds for approximation algorithms; solved combinatorial sub-problem via reduction to polyomino tiling; empirically validated algorithm performance using Python and C++.
- Co-authored paper published at AAMAS '23 (international conference). Won Regeneron STS Scholar for my research.

Johns Hopkins Applied Physics Laboratory: Data Science Intern — Oct. 2021—May 2022

- Interned through the ASPIRE program; investigated the relationship between climate change and human migration.
- Used Pandas in Python to process/organize 10 years of flood data from the Dartmouth Flood Observatory and population data from the US census; performed statistical analyses through regression modeling.

SpringGem Weather Information: Research Intern — Jun. 2020—Mar. 2021

- Researched road ice detection in drone images. Conducted field experiments and processed/analyzed images; my work validated the feasibility of detecting road ice using NDVI in calibrated RGN photographs.
- Co-authored paper presented at the 2020 American Geophysical Union (AGU) Fall Meeting.

HONORS & AWARDS

- US Presidential Scholar; Regeneron Science Talent Search Scholar; National Merit Scholar
- Putnam Top 400; USAMO (USA Math Olympiad) Qualifier, USAJMO Top 50
- USAPhO (USA Physics Olympiad) Semifinalist
- USACO (USA Computing Olympiad) Gold Division
- Harvard Quant Trading Competition: 2nd place overall

PROJECTS & EXTRACURRICULARS

Tradeswipe: Sole Developer

- Developed Tradeswipe, a full-stack web app for MIT students to buy/sell meal swipes (both live and asynchronously).
- Built frontend with React, and REST API + backend server with Node/Express/Mongoose. Used SocketIO for live updates.

Math4All: Founder and (Former) President

- Founded Math4All, a 501(c)(3) nonprofit dedicated to making competitive math more accessible.
- Led team of 40+ student volunteers; engaged 1000+ students from 20+ countries through free contests & classes.

Activities: MIT THINK, Undergraduate Math Association, MIT Informatics Tournament, Men's Club Volleyball

SKILLS

Programming Languages: Python, C++, Java, JavaScript/Typescript, HTML/CSS
Frameworks & Libraries: React, Node.js, Express.js, MongoDB, SocketIO, Pandas, Numpy/Matplotlib
Software & Tools: Git/GitHub, VS Code, Microsoft Office, Google Suite, LaTeX
Languages: English (native/bilingual), Chinese (native/bilingual), Spanish (intermediate)