Jeremy Zhou

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MIT math/CS student with sharp, broad analytical skills: USA Math Olympiad top 60, full-stack development of 8 websites. Seeking software or data internship to maximize impact and growth. Passion for software, problem solving, data, and improving lives.

EDUCATION

Massachusetts Institute of Technology *Expected: May 2024*

- Candidate for Bachelor of Science, Mathematics & Computer Science and Engineering; Minor in Economics
- Undergraduate Research, TechX – xFair, Harvard-MIT Math Tournament, AI@MIT, Firespinning, Greek Life
- Coursework: Computer Vision, Inference and Information, Statistics, Algorithms II, Graph Theory, Commutative Algebra

Phillips Academy at Andover

- GPA: 5.9/6.0
- Math Club, *The Phillipian* (school newspaper), Physics Club, Linguistics Club, Photon (poi spinning), Nordic skiing
- Relevant coursework: Full Stack App Development, Computer Science Research

EXPERIENCE

Data Science Student Researcher: MIT Institute for Data, Systems, and Society

- Collaboration with postdoc and grad students, advised by professors at MIT Sloan, CS, and political science departments.
- Create Android app, analyze usage data to study social media user behavior and understand content recommendations.

Developer/Board Member: MIT xFair (https://xfair.io/)

- Organize largest MIT student-run career fair w/2000+ student attendees. Promote xFair to company representatives.
- Design and develop application portal used by companies to register. Coordinate with dev, marketing, and logistics teams.

Participant: MIT Mathematics Directed Reading Program

- Read Robin Hartshorne's *Algebraic Geometry*, a standard graduate-level mathematics text, with graduate student mentor.
- Create presentation on the relationship between groups of line bundles and divisors, presented on February 1, 2022.

Physics Student Researcher: University of Wisconsin-Madison

- Devised cutting-edge research on ferroelectric thin films with direct applications to nano-scale electronics.
- Analyzed 15 theoretical and simulation papers. Formulated robust simulation, data manipulation and visualization w/NumPy.

Mathematics Student Researcher: MIT Program for Research In Mathematics, Engineering, and Science (PRIMES) (https://arxiv.org/abs/2008.00424)

- Introduced an extensive novel combinatorial framework to resolve a recent open problem in algebraic graph theory.
- Evaluated 30 related papers from professional journals. Consulted professors/grad students from MIT, Tufts, UT Austin.
- Authored poster, professional paper, slides. Presented at PRIMES 2019, Joint Mathematics Meetings 2019–2021.

Tournament Director/Lead Developer: Math Open At Andover (MOAA) (https://andovermathopen.com/)

- Directed team of 8 to construct a new virtual MOAA: organization, sponsor acquisition, advertising, logistics, web dev, etc.
- Overhauled website w/frontend and backend work. Attained $19K in sponsorships, allowing removal of registration fee.
- Hosted MOAA w/1100+ participants, who interacted in our virtual community space and attended 6 talks by sponsors.

AWARDS

2 x Qualifier: Mathematical Olympiad Program (MOP)
national top 60

Silver Medal: International Linguistics Olympiad (IOL)
international top 30

Gold Medal: USA Physics Olympiad (USAPhO)
national top 40

Scholar: Regeneron Science Talent Search (STS)
national top 300

3 x Outstanding Undergraduate Student Poster: Joint Mathematics Meetings (JMM)
largest mathematics conference in the USA

SKILLS

Languages	Python, Java, C++, HTML/CSS, JavaScript, Julia
Tools/Frameworks	Django, Node.js, D3.js, PostgreSQL, MongoDB, NumPy, Pandas, MatPlotLib, Scikit-Learn, PyTorch, JuMP, Linux/Unix, Git, Docker