Xenia Zhao

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EDUCATION

Massachusetts Institute of Technology (MIT)   *2021-2025*
- Candidate for Bachelor of Science in Computer Science and Bachelor of Science in Economics
- Relevant courses: Fundamentals of Programming, Computational Thinking and Data Analysis, Statistical Methods, Econometrics, Microeconomics, Macroeconomics, Algorithms, Machine Learning, WebLab
- GPA: 4.8/5.0

RESEARCH

Populating 'Digital Twins' from Public Data Sources to Support Integrated Urban Modeling   *Sep 2022-Feb 2023*
- Examined datasets in QGIS to create a comprehensive view of urban activity
- Used Google Places API to extract points of interest in the Metro Boston area

Options for Decarbonizing Aviation: an assessment of air transportation demand and fuel consumption   *Jan 2022-May 2022*
- Used Excel to model passenger aviation flows by geographic region
- With MIT senior research scientist Sergey Paltsev at the MIT Energy Initiative

Rethinking Food Waste: optimizing the food bank supply chain to tackle food waste and food insecurity   *Aug 2020-Apr 2021*
- Used Python and GAMS optimization software to balance economic, environmental, and social goals
- Won 2nd at International Science and Engineering Fair

Modeling Plastic Pollution: a system dynamics approach to understand and control macroscopic plastic flow   *Apr 2019-May 2020*
- Used queueing theory to predict plastic waste in the ocean and estimate cleanup times
- Paper (first author) presented at 2nd Global Symposium on Waste Plastic

WORK EXPERIENCE

MIT Fundamentals of Programming – Lab Assistant   *Feb 2023-Present*
- Help students troubleshoot code, including in topics like image processing, SAT solvers, and interpreters
- Support students through concepts in programming, like recursion and graph search

World Wildlife Fund (WWF) – Sustainability and Innovation Intern   *Jun 2022-Aug 2022*
- Designed original project on tracking scope 3 carbon emissions through agrifood supply chains
- Assessed impacts of different accounting frameworks for suppliers, consumers, and investors
- Examined and redesigned methodology for calculations of carbon emissions from land use change

LEADERSHIP EXPERIENCE

Women Business Leaders – High School Outreach and Development Chair   *Sep 2022-Present*
- Learn and practice skills in entrepreneurship, consulting, and finance
- Organize high school conference, introducing topics in business to students in underrepresented genders

Undergraduate Association – Committee on Sustainability   *Feb 2022-Present*
- Engage the broader undergraduate community in current environmental and climate policy
- Manage a community garden on campus to promote green spaces and gardening

Asian American Initiative – Zine Co-lead   *Jan 2022-Present*
- Organize campus-wide workshops and solicit submissions from AAPI visual and literary artists
- Design, compile, and print 400 copies of zine, distribute to wider MIT community

DISTINCTIONS

American Invitational Mathematics Examination (AIME) Qualifier   2020, 2021
US Physics Olympiad (USAPhO) Qualifier   2020
National Merit Finalist and Scholarship Recipient   2021

SKILLS
- Technical: Python, Excel, Stata, HTML, CSS, Javascript, React, git, QGIS, SQL
- Languages: English, Mandarin, Spanish