**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