

## Tristan Chaang

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### Education

<b>Massachusetts Institute of Technology</b> , Cambridge, MA	June 2027
• Candidate for BS in Mathematics & Computer Science and Engineering & a Minor in Physics	GPA: 5.0/5.0
• Coursework Highlights: Algorithm Designs, ML, Quantum Computation, Statistics, Natural Language Processing, Software Design, Topology, Analysis	(Sophomore)

### Experience

<b>Undergraduate Researcher</b> , CS & AI Lab (CSAIL), MIT	Fall 2024
<i>Self-Supervised Machine Learning Model for Screening Optimization in Connectomics</i>	
• Design and test self-supervised ML models to optimize data acquisition time via variable duration	
• Make way for faster graph construction representing neuron connections in the brain	
<b>Teaching Assistant</b> for <b>Algorithms Class</b> (6.1210) and <b>Classical Mechanics</b> (8.011)	Spring and Fall 2024
• Hold weekly office hours and recitations; proctor and grade final exams	
<b>Undergraduate Researcher</b> , Department of Earth, Atmospheric, and Planetary Sciences, MIT	Spring and Summer 2024
<i>GPS/GNSS Jupyter Notebook Interface for Time Series Analysis</i>	
• Develop a Jupyter Notebook that allows users to utilize time position series data	
• Outline patterns and correlations from time series data to understand changes of Earth's surface	
<b>Undergraduate Researcher</b> , Department of Mathematics, MIT	Winter 2024
<i>Investigating the Motion of Pilot-Wave Walkers in a Circular Corral</i>	
• Study the behavior of droplets bouncing on a vibrating oil bath via MATLAB	
<b>Youth Stem Cup 2023 Organizer</b> , Malaysia	Summer 2023
<i>Head of Problem Selection Committee (PSC)</i>	
• Organize the first ever student-led national science Olympiad in Malaysia	
• Lead the PSC to: Invite problem setters, produce the exam paper, cross-check validity etc.	
<b>IMO Committee Malaysia</b> , Malaysia	2021-2023
<i>Trainer and Problem Selection Committee Member</i>	
• Train students in the IMO Selection Camp of Malaysia	
• Write handouts and set problems for camp tests and IMO shortlist proposals	

### Activities & Extracurriculars

<b>2024 Discover Citadel and Citadel Securities</b> , New York	Spring 2024
• Explore and learn about different roles at Citadel through various activities and networking events.	
<b>Life on Stage Theatre (LOST)</b> , MIT	2024-Present
• Cast actor for one of the lead characters in a student-led theatre play	
<b>Swimming Club</b> , Sunway College, Malaysia	2021-2023
• Help the committee run pool activities and teach beginners breaststroke and freestyle	

### Awards & Accomplishments

<b>William Lowell Putnam Mathematical Competition</b> by MAA	Fall 2023
• Honorable Mention (Top 100)	
<b>International Mathematical Olympiad</b>	2018-2022
• Bronze Medals (2020, 2022) and Honorable Mentions (2018, 2019, 2021)	
<b>Malaysian Physics, Computational Linguistics, and Economics Olympiads</b>	2020-2022
• Silver and Bronze Medals	

### Skills & Interests

<b>Languages:</b>	Fluency in English, Cantonese, Mandarin, and Malay; Beginner level in Japanese and French
<b>Software:</b>	Familiarity with Python, C++, C, JavaScript, CSS + HTML5, LaTeX, MATLAB, Mathematica
<b>Authored:</b>	"Techniques for High School Mathematics Contests" (on Google Books)
<b>Interests:</b>	Abstract Algebra, Topology, Quantum Physics, AI, Programming, Linguistics