

# Chris Ge

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## EDUCATION

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**Massachusetts Institute of Technology** | Cambridge, MA

Expected Graduation: May 2027

- Candidate for B.S. in Computer Science and B.S. in Mathematics, GPA: 5.0/5.0
- Relevant Coursework: Design and Analysis of Algorithms, Introduction to Machine Learning, Introduction to Low-level Programming in C and Assembly, Probability and Random Variables, Differential Equations

**Mission San Jose High School** | Fremont, CA

June 2023

- Valedictorian, GPA: 4.0 (unweighted), SAT: 1600, ACT: 36
- Awards: USAMO Bronze Medalist (2x), USAPhO Silver Medalist (2x), USACO Gold Division, USNCO Honors, National Merit Finalist and Scholarship Recipient

## SKILLS

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**Technical:** C++, Python, PyTorch, React.js, Flask, Next.js, HTML, CSS, Bootstrap, JavaScript, TypeScript, MongoDB, Express, Java, Git, MATLAB, PHP, SQL, LaTeX, Excel, Autodesk Fusion 360

**Languages:** English (Native), Mandarin (Conversational)

## EXPERIENCE

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**MIT Media Lab** | Undergraduate Researcher in Signal Kinetics Group

December 2023 – Present

- Creating battery-free 3D underwater localization system for real-time tracking of mobile targets.
- Simulating ocean environments in MATLAB to test node, transmitter, and hydrophone layouts.
- Implementing a particle filter to combine data from IMU sensors with hydrophone outputs for better accuracy.
- Translating code from MATLAB to Python & integrating with signal transmitter / receiver for production deployment

**Ross Mathematics Program** | Junior Counselor

June – July 2022

- Participated in advanced courses led by OSU professors on Dirichlet L-functions, Ergodic Ramsey Theory, and the Erdos-Falconer distance problem over finite fields.
- Guided and assisted 60 first-year campers through 30 number theory problem sets.

## PROJECTS

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**Tone-me** | Chinese mandarin pronunciation assistant

October – December 2023

- Analyzed tones in spoken Chinese sentence and presents correct pronunciations to identify pronunciation issues
- Fine-tuned Wave2vec2 transformer network model for tone classification task to evaluate user's tone pronunciations
- Utilized OpenAI's Whisper automatic speech recognition model and Pydub to split audio sentences into syllables
- Built full-stack demo using Next.js, React, and Flask, deployed as a web service on Render for seamless user experience

**HOT Maps** | OpenStreetMap Tutorial Game and Assessment

April 2024

- Created an online game for Humanitarian OpenStreetMaps to better attract and assess volunteer mappers
- Developed in Javascript, using d3.js to project and visualize GeoJSON data for the user interface

**Softblocker** | Productivity Chrome extension

July – August 2022

- Temporarily freezes specific websites based on a time limit to promote productivity.
- Developed using Javascript, HTML, and CSS to manage users' browser activity, with 100 installs by unique users.

## LEADERSHIP AND ACTIVITIES

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**MIT Undergraduate Math Association** | Social Committee Member

September 2023 – Present

- Organize and host socials for 80 members, including estimathons, Pi Day celebrations, and card game tournaments