

Xinmeng Li

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EDUCATION

The MacDuffie School

Sep 2023–Jun 2027 (expected)

Granby, Massachusetts, USA | Cumulative GPA: 3.81/4.0

Selected coursework: Calculus BC and multivariable calculus; AP Computer Science Principles; AP Physics 1; Honors Pre-Calculus; Honors Chemistry.

SELECTED CREATIVE PROJECTS

Aqua Ball

Handheld motion-controlled instrument

- Conceived and built an ocean-inspired instrument with Arduino, an IMU, Wi-Fi/OSC and Max; mapped motion to sample volume, speed, position and effects.
- Created samples through MIDI improvisation in Logic Pro, soldered the electronics and programmed the instrument with AI assistance; tested TPU 85A, 90A and 95A and selected 90A.

Physical design concept by Xinmeng Li; 3D modeling by Zhikang Xu.

Neural Bird Synthesizer

Interactive neural audio instrument

- Prepared and denoised downloaded bird recordings, then trained an IRCAM RAVE model in Google Colab.
- Designed the interface and instrument functions; implemented a browser-based tool with Python, PyTorch and FastAPI using AI-assisted coding.

Tyrannicides

Electroacoustic composition

- Composed an electroacoustic work inspired by Philippe Manoury's Jupiter using aulos and lyre samples from Splice.
- Used Logic Pro Flex editing, spectral processing and bus routing to reshape the samples and control texture and stereo imaging.

Hyper Bloom

Electronic composition and sound design

- Composed and produced an electronic work in Logic Pro and Serum 2, combining square- and saw-wave accompaniment with piano.
- Designed wavetable timbres and harmonics; used portamento, EQ, sidechain processing and Stereo Spread to shape transitions and the mix.

Under the Same Sun

Feb–Mar 2026

Lyrics and AI-assisted song project

- Wrote lyrics addressing domestic violence and discrimination, then used Suno for the musical arrangement.

ACADEMIC PROJECTS

Clogged Arteries

May 2026

- Created a science infographic explaining arterial blockage and preventive health measures.

Physics Laboratory Project

May 2026

- Conducted an experiment, analyzed data and presented the findings in a two-week class project.

History of Rocket Inventions

Apr–May 2026

- Wrote a history paper on rocket inventions and presented the findings in class.

Automated Spelling Quiz

Feb–Mar 2026

- Built a shareable spelling-quiz website with questions organized by difficulty and integrated audio prompts.

PERFORMANCE

Chinese Student Association Spring Gala

Feb 2026

Pianist

- Performed Exodus with a student-organized ensemble of piano, drums and two violins.

The MacDuffie School Annual Spring Concert

Pianist

- Played piano in four ensemble pieces at a school Spring Concert.

School Chorus and Music Ensemble

2023–present

Pianist and section leader

- Accompanied choral pieces and school musical productions.

ACTIVITIES AND SERVICE

The MacDuffie School Tennis and Swim Teams

2023–present

- Participated in tennis and swimming; received a varsity tennis participation certificate in Spring 2024.

Community Service

- Completed 40 cumulative service hours, including senior-home visits and supply distribution; regularly donated lasagna from Grade 11 onward.
- Helped clean the school gym and maintain equipment weekly; worked backstage for annual winter musicals.
- Completed an 8 km breast cancer charity walk.

AWARDS AND QUALIFICATIONS

PhysicsBowl: third place within The MacDuffie School | Apr 2026

Artist of the Month, The MacDuffie Art Department | Oct 2025

The Outstanding Instrumentalist Award – Upper School, The MacDuffie School | 2025

ABRSM Piano Grade 8 and Music Theory Grade 5

Young Artist Member, US Beacon Artist Association

SKILLS

Music and audio: Logic Pro, Serum 2, Max; classical piano (12+ years), cello, drum kit; sight-singing and aural training.

Programming and hardware: Python, Java, Scratch, Arduino, soldering; RAVE model training and AI-assisted coding.

Languages: Mandarin (native), English.