Jiayuan Liu

ELECTRICAL AND COMPUTER ENGINEER

Contact

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Links

LinkedIn: jiayuan-liu-19513521b

GitHub: Chidunbo

Skills

- MATLAB
- Python
- Arduino/C++
- KiCad
- SolidWorks
- Unity
- HTML & CSS

Languages

- Mandarin
- English
- Spanish

Education

Electrical and Computer Engineering (ECE), Olin College, Needham

JUNE 2025

GPA: 3.82/4

Recipient of a 50% Olin Merit Scholarship

Work Experience

Student Researcher at Tow Lab, Olin College

OCTOBER 2021 — PRESENT

- Co-designed and wired circuit for batch RO system that earned the top prize—$150,000—in the “More Water Less Concentrate” competition
- Build and conduct experiments on single-cell batch RO system to study scalant formation on membrane
- Simulate model for water conductivity, flux, osmotic pressure in testing system with MATLAB
- Analyze data collected by Arduino and DAQ from sensors (conductivity transmitter, flow meters, pressure sensor, etc.) with MATLAB

Game Design Subteam Lead at OUT Maine

OCTOBER 2021 — PRESENT

- Design online, interactive, educational game for members in the OUT Maine organization to engage with different genders and sexual identities
- Lead art sub-team in designing 2D pixel art with Photoshop and Unity

Quantitative Engineering Analysis(QEA) Course Assistant at Olin College

SEPTEMBER 2022 — PRESENT

- Tutor QEA I students in linear algebra, calculus, and basic programming

Academic Projects

"Brailldle" Braille Translator, MakeMIT Makeathon Winner

FEBRUARY 2022

Designed and prototyped computer-vision based Braille translator that assist blind individuals with reading

"Hole in the Camera" Deep-Pose Python Game,

APRIL 2022 — MAY 2022

Created virtual version of "Hole in the Wall" game in python, with a deep neural network **Deep Pose** to estimate player's joint positions

EMG Machine Learning Student Research,

FEBRUARY 2022 — MAY 2022

Collected and classified EMG signals using OpenBCI and Python; Used three hand motion signals to control MagicLeap AR headset

Fins Structure Design, Olin Rocketry Team

SEPTEMBER 2021 — PRESENT

Designed rocket fins using OpenRocket and SolidWorks for high-power rocket with above 6000ft apogee; prototyped and built fins with fiberglass and epoxy

Arduino-Based 3D Scanning Machine

SEPTEMBER 2022

Designed and built rudimentary 3D scanner using pan-tilt mechanism with IR sensor, servo motors, Arduino, and MATLAB