

Jiamei (Diana) Wang

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EDUCATION

Massachusetts Institute of Technology (MIT)

Class of 2027

- Candidate for Bachelor of Science in Electrical Engineering & Computer Science
- **GPA:** 4.8/5.0
- **Relevant Coursework:** Power Electronics Lab, Electromagnetic Forces & Fields, Signal Processing, Semiconductor Electronic Circuits, Analog Electronics Lab, Dynamic System Modeling & Control Design, Fundamentals of Programming

EXPERIENCE

MIT Power Electronics Research Group

Cambridge, MA

Undergraduate Researcher

February 2025 – Present

- Designing a Class E inverter that can generate 30 MHz AC power with high efficiency using soft switching. Optimizing for losses and output power range via LTSpice simulations.
- Developed compact magnetic-cored RF inductor variants achieving 50% volume reduction with < 20% quality factor degradation using electromagnetic and thermal simulation in ANSYS Maxwell and ICEPAK.
- Co-authored a [publication](#) accepted into the IEEE Open Journal of Power Electronics.

Circuits and Electronics Course

Cambridge, MA

Lab Assistant

September 2025 – Present

- Mentoring a course with 200+ students in circuit theory including linear network analysis, first/second-order system dynamics, and operational amplifiers during recitations and office hours.
- Provide debugging support for hands-on projects such as bass-boost filters and light-following robots in weekly lab sessions using tools like oscilloscope and multimeter.

MIT Arcturus Robotics Team

Cambridge, MA

Team Member

August 2025 – Present

- Designed a multi-actuator control PCB, integrating stepper, servo, and DC motor drivers with battery protection and voltage regulation to support mixed-voltage operations. Writing firmware for displaying actuators' status via a Python GUI and adjusting output voltages via ADC inputs.

PROJECTS

Power Electronics Lab Course

Cambridge, MA

Course Projects

September 2025 – December 2025

- Designed and integrated a boost converter, coupled-inductor SEPIC converter, and a Class-D audio amplifier for a Leslie speaker build. Measured < 300 mV output voltage ripple at 50 kHz switching frequency for both converters and verified frequency response of audio amplifier's hybrid Butterworth filter.
- Designed and tested a 24V-to-200V flyback converter for camera flash drive, a LED driver using a DCM boost converter, a resonant converter that strikes a fluorescent ballast at 300V and supplies ~100V nominally, a three-phase inverter for induction motor drive

Optimized RISC-V Processor

Cambridge, MA

Digital Design Project

February 2025 – May 2025

- Engineered 4-stage pipelined RISC-V with 37 instructions achieving 80% runtime reduction on MNIST neural network training (written in C) through custom instruction extensions, cache optimizations, and advanced combinational blocks.

MIT Hackathon (HackMIT)

Cambridge, MA

2nd Place for Y Combinator Remake Challenge

September 2025

- Built the storage service backend (in Python) of an AI-powered Desktop app that enables users to centralize their files and selectively extract and share context with LLMs with one click.

LEADERSHIP

MIT Gordon Leadership Program (GEL)

Cambridge, MA

Program Member

September 2025 – Present

- Developing leadership and teamwork skills via weekly simulated engineering labs and discussions to complement MIT's technical coursework.

SKILLS

Software: Python, C, MATLAB, Verilog/SystemVerilog, RISC-V Assembly, Git, bash, Arduino

Hardware: Altium, KiCad, LTSpice, ANSYS Maxwell/ICEPAK, Onshape, Oscilloscope, Logic analyzer, Soldering