

Peijie Liu

Atlanta, GA 30332 | +1(470)510-1408 | pliu369@gatech.edu
<https://peijieluigt.github.io/> | <https://www.linkedin.com/in/peijie-liu-gatech/>

Objective

Passionate Electrical Engineering sophomore (junior academically) with extensive PCB layout experience and full-stack electronics development skills. Avionics HITL Responsible Engineer at YJSP. Particularly adept with operational amplifier applications, precision and high-speed ADC/DAC systems, and FPGA HDL programming. Seeking an internship in hardware design starting May 2026.

Education

Georgia Institute of Technology | Atlanta, GA

Bachelor of Science in Electrical Engineering, Minor in Robotics, GPA 4.00.

*August 2025 – Present
Expected Graduation, May 2028*

Skills

Programming: C++, C, RISC-V Assembly, Verilog HDL, MATLAB, Java.

Hardware: STM32/AVR MCUs, Artix-7/ZYNQ FPGAs, Analog Components, Oscilloscope, Logic Analyzer.

Software: Altium Designer, LTSpice, PSpice, Vivado, ModelSim, STM32CubeIDE, IntelliJ, VS Code, MATLAB.

Languages: English (fluent), Mandarin (native), Japanese (beginner); Communication via conference, end-users, and live streaming.

Experience

Yellow Jacket Space Program | Georgia Institute of Technology

August 2025 – Present

Avionics Hardware-In-The-Loop (HITL) Responsible Engineer

- Design, harness and operate the HITL system, which aims to test full avionics system against real-time emulated rocket before launch. Recruited hardware/software engineers to develop automated CI/CD pipeline system. Designing layout for core PCBs.
- Architected precision DAC system with analog backends and ADC self-calibration to accurately emulate RTD, Valve, PT, TC, etc.

RoboRambler | Georgia Institute of Technology

January 2026 – Present

Electrical Responsible Engineer

- Revitalized CAN–UART–USB protocol converter design; developing embedded firmware for supercapacitor intelligent converter.

Interactive Music Group – Vertically Integrated Projects | Georgia Institute of Technology

January 2026 – Present

Embedded System Engineer

- Developing AI-powered self-meshing DSP system for interactive musical instruments. Laying out customized PCB for drum pad.

Engineering Intern | Moondrop Co., Ltd.

September 2024 – August 2025

Technical Content Creator & Contracted Vlogger

- Curated channel that attracted 1M+ views and 10k+ active subscribers, generating consistent monthly revenue of \$200.
- Conducted electroacoustic research on DAC circuits, achieving industry-leading performance of -145dB THD and -123dB THD+N.

Projects

μCHIMERA(Micro Composite Harvesting & Integrated Modular Energy Regeneration Array) - Chief Engineer

January 2026

A stackable multi-source energy harvesting system for battery-free or implantable wearable, integrating Solar (5μW-510mW with MPPT), Thermoelectric (cold-start at 20mV, operates at 0.2°C ΔT), and Piezoelectric (88mW RMS from random vibration) modules.

- Engineered power conversion circuitry featuring <1μA quiescent current and 4-ch stackable energy routing with smart control.
- Competed in Georgia Tech's 2026 InVenture Prize, securing \$1,000 in seed funding for advancing energy-autonomous technique

Super FDA (Fully Differential Amplifier) - Individual Product Manager and Developer

April 2025

A 200W fully differential Class AB amplifier that can shift dynamically among 4 feedback architectures and 2 input stages, achieving as much -135dB THD and -116dB THD+N, realizing 80Vpp output under ±24V supply, and supporting stable remote feedback.

- Engineered innovative Mosfet bias compensation circuit that reduced crossover distortion, achieving -105dB open-loop THD+N.
- Developed high-power linear LDO architecture that achieves 20A output with 2.5V dropout voltage. Patent application pending.
- Designed and fabricated 5 PCB iterations, successfully launched product to market and generated over \$1,000 in revenue.

Relevant Coursework

Circuit Analysis: DC/AC circuit theory, operational amplifiers circuits, network analysis techniques (node/mesh analysis, Thevenin/Norton theorems), phasor analysis, frequency response, Bode plots, Laplace transforms, power/transient analysis.

Programming for Hardware/Software Systems: C programming, RISC-V & MIPS assembly, data structures, memory management, operating systems, embedded systems, performance optimization, compiler design, ARM microcontroller programming.

Awards

IEEE Robotech 2026 | Georgia Institute of Technology | “Tachy-Astroach”

January 2026

Champion Team | Chief Electronic Engineer

Designed and built full electronics hardware for our remote-controlled parent-subunit quadruped robot system within 36 hours.