Peijie Liu

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Objective

Passionate first-year Electrical Engineering student with extensive PCB layout experience and full-stack electronics development skills. HITL Responsible Engineer at YJSP Avionics. Particularly adept with operational amplifier applications, precision / 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 *August 2025 – Present*
Bachelor of Science in Electrical Engineering, Minor in Robotics, GPA 4.00. *Expected Graduation, May 2029*

Nanjing Jinling High School | Nanjing, China *September 2022 – May 2025*
Achieved nine 5's and two 4's across 11 AP examinations, SAT 1560, GPA 4.26/4.32.

Skills

Programming: C++, C, Java, Verilog HDL, MATLAB.
Hardware: STM32/AVR RISCs, Artix-7/ZYNQ FPGAs, Analog Components, Oscilloscope, Logic Analyzer.
Software: Altium Designer, lcEDA, Vivado, ModelSim, TinaTI, PSpice, Keli uVision, STM32CubeIDE, IntelliJ, VS Code, MATLAB.
Languages: English (fluent), Mandarin (native), Japanese (beginner); Communication via conference, end-users, and live streaming.

Experience

Moondrop Co., Ltd. | Chengdu, China *2024 – 2025*
Technical Content Creator & Contracted Vlogger / Engineering Intern
Directed instrument-based product reviews and promotion support with their Audiophile DACs, Amplifiers and Transducers.

- Developed channel that attracted 1M+ views and 10k+ active subscribers, generating consistent monthly revenue of $200.
- Executed comprehensive electroacoustic measurement and research on more than 10 DAC/LPF circuits, achieving industry-leading performance metrics of -145dB THD and -123dB THD+N at 1kHz.

Projects

Super FDA (Fully Differential Amplifier) *April 2025*
Individual Product Manager and Developer
This project aimed at developing a 200W fully differential Class AB amplifier that achieves low distortion and high efficiency. The circuit can shift dynamically among 4 feedback architectures and 2 input stages, achieving as much -135dB THD and -116dB THD+N.

- Designed and fabricated 5 PCB iterations, successfully launched product to market and generated over $1,000 in revenue.
- Engineered innovative Mosfet bias compensation circuit that reduced crossover distortion, achieving -105dB open-loop THD+N.
- Implemented fully differential architecture, realizing 80Vpp output within ±24V supply and supporting remote common-mode feedback to eliminate jamming, which is reformatory compared to traditional amplifiers. Patent application pending.
- Developed high-power linear LDO architecture that achieves 10A output with 2.5V dropout voltage. Patent application pending.

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.
Digital System Design: Boolean algebra, combinational/sequential logic, state machines, memory architectures, datapath design with register files, RISC instruction set architecture, assembly language programming, single-cycle computer design.

Leadership or Activities

Yellow Jacket Space Program | Georgia Institute of Technology
Avionics Hardware-In-The-Loop (HITL) Responsible Engineer *August 2025 – Present*

- Designed, harnessed and operated 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. Layout the core PCBs.
- Created analog circuits such as current sinks to accurately emulate behaviors of RTDs, Valves, PTs, TCs, etc.

Hytech Racing | Georgia Institute of Technology
Electrical Low-voltage Control Engineer *August 2025 – Present*

- Revitalized maintenance panel design by switching to Solid-State Power Controllers. Helped tutor new members on PCB layout.