
Objective

Self-directed electrical engineering enthusiast with a passion for hardware repair, embedded systems, and digital restoration. I specialize in revitalizing “dead” or obsolete tech, such as installing Linux on 20-year-old computers, through custom firmware development, reverse engineering, and in-depth diagnostics. My goal is to apply hands-on experience and creative problem-solving skills in Physics academia and Electrical Engineering with a focus on embedded circuits.

Education

2023–2024 **Linkou Kang Quo International School**, Linkou, New Taipei City, Taiwan

Clubs: Model United Nations, EE Club, Policy/Public Forums. Academic Interests: Electrical Engineering, Material Sciences, Policy Debate. Relevant Courses: Honors World History, Honors Band

2024–2026 **San Ramon Valley High School**, Danville, California

Clubs: Model United Nations, Team 1280 Robotics Team, IEEE Club. Academic Interests: Electrical Engineering, Quantum Information Theory, Applied Mathematics, Material Sciences, Policy Debate. Relevant Courses: AP Calculus B, AP Computer Science, Robotics, Auto Tech

Technical Contributions & Hacktivities

Business and Electrical Lead / FRC Robotics Team 1280

2024–Present **Ragin’ Circuit**, Danville, California

Business: Write grant 50+ applications, email cooperate sponsors; manage and order parts, managed club funds of \$50,000, built a project management system on Notion to ensure we meet cooperate deadlines and hit funding targets. I helped get 34% more than the previous fiscal year. **Electrical:** Train the 30 new members in basics and safety of electrical systems, provide hands-on experience; designed a system to detect and isolate CAN Bus errors, built a system for simple debugging and maintenance,

MIT Open Compute Lab

2025–Present **MIT OCL**, Cambridge, Massachusetts

Explored the philosophy of open-source hardware and the extent to which components can be considered open. I worked with graduate students, undergrad-students ranging from the East to the West coast. We discussed and communicated primarily online, contributions managed by Github. I audited many RISC-V confrences from online and presented findings and new extensions. Contributed to the open source CV 6 RISC-V core and helped develop a clone project. Actively working on various MIT OCL projects from the Tiny GPU to a Operating System that runs doom on RISC-V. Our eventual goal: Develop an SoC based on RISC-V architecture, comparable to modern systems like the Apple M1, with powerful GPU support and extensive Linux compatibility at a much lower cost,

Hardware Restoration

2019–Present **InLabs**, Danville, California; Beitou, Taipei, Taiwan

Reverse engineering and preserve hardware deemed “old.” Installed Linux on old family computers, comparing performance with Windows and making hardware modifications to improve performance. I found that the linux kernel is much more efficient at handling multi-threaded, a truly efficient parallel computing operating system. Daily drove a 2012 laptop, teaching me to be creative with limited computing resources. Reverse-engineered game consoles to install Linux and helped friends jailbreak or reflash firmware on old devices for new use cases.

erkeley ML Research

Summer 2025 **CCE**, *erkeley, California*

Developed a Reinforcement Learning model to predict stock outcomes. Created a training environment where the agent analyzes 15 stocks and predicts future performance. In Result, I've significantly overestimated the training data and created a strong weights that could determine stocks future trajectory. My Deep Q-Learning model has consistantly predicting high surges at rantom times accurately. Strengthened skills relevant to the current I boom, focusing on learning over profit. Developed nuanced understanding of the I Boom and strong belief in ethical I development.

Creative Interests

Musical

KCIS Band Tenor Saxophone, Ito Saxophone
Director

Personal Piano (2015–Present), Bass Guitar

STEM

Creative Retro tech restoration, circuit analysis, custom keyboards, sound engineering
Engineering

Open Tech Open-source projects, open electronics, ethical hacking

Personal Public discourse, problem-solving challenges, reading system-level documentation

Policy

Politics Constant news intake, policy letters, political discourse

Diplomatic Independent journalism, humanitarian support

cademic Enrichment

Electrical Circuit diagnostics, soldering, board-level repair, component testing
Engineering

Reverse Firmware analysis, system patching, memory mapping, logic probing
Engineering

Embedded rduino, Raspberry Pi, custom MCU projects
Systems

Programming Python, Julia, Rust, Fortran95, Cobol, C/C++, Bash/Shellscript, Java (intermediate), s-
sembly (x86, rm64, RISC-V64), Verilog

Tools Multimeter, Oscilloscope, Logic nalyzer, JT G Probing, KiCad, Linux, L_TE_X

Soft Skills Detail-oriented, systems management, debate and public speaking, patience under pressure,
music-trained discipline, self-taught learner