JONATHAN LIN

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EDUCATION

University of California, Irvine Anticipated Grad Date: June 2027
Bachelor of Science in Computer Engineering *GPA: 3.77 / 4.00*

- **Honors:** Campuswide Honors Collegium, Dean's Honor List (all quarters), IEEE-HKN (Eta Kappa Nu)
- **Enrolled Courses:** Java Object Oriented Systems and Programming, Computer Process Design using VHDL, UAV Drones, Semiconductors and Transistors, Digital Signal Processing
- **Relevant Coursework:** Computer Architecture, Advanced C Programming, Digital Logic Design, Verilog HDL, Assembly

TECHNICAL SKILLS

Software Tools and Programming Languages: Altium Designer (2 years) | Xilinx Vivado (1 year) | Linux (1 year) | LTSpice (2 years) | Git (2 years) | GNU Radio (1 year) | Python (3 years) | C (1 year) | C++ (1 year) | RISC-V Assembly (1 year) | Java (2 years)

PROFESSIONAL EXPERIENCE

InfoStellar | GNU Radio, SDR, AI/ML, Python, MATLAB, TorchSig **June 2025 - August 2025**
Radio Frequency Engineer *Tokyo, Japan*

- Developed signal detection pipelines in GNU Radio and Python to extract features such as bandwidth and SNR from IQ data
- Built an Automatic Modulation Classification pipeline (AMC) by integrating the TorchSig library with custom preprocessing and trained an XCiT1d deep learning model on the Sig53 dataset
- Resolved ML model training challenges by debugging TorchSig source code, fixing dataset handling issues, and configuring CUDA on the AWS EC2 server for GPU-accelerated model training
- Captured and analyzed live RF signals data with RTL-SDR hardware and GNU Radio flowgraphs
- Contributed to RFML research by reviewing academic papers, experimenting with open source repositories to guide AMC pipeline design decisions, and making contributions to the TorchSig repository source code

EXTRACURRICULAR ACTIVITIES

University of California Irvine CubeSat Project **January 2025 - Present**
Communications Subteam Lead and Hardware Engineer *Irvine, CA*

- Designed custom RF transceiver PCBs from component research to schematic design and PCB layout using Altium Designer
- Conducted analysis of antenna and RF components using datasheets, documentation, and technical video presentations
- Developed a 4-layer RF PCB stack-up, selecting materials and layer configurations for RF transmission line signal integrity and careful impedance matching based on manufacturing capabilities
- Managed a team of 10 software and hardware engineers to achieve our quarterly goals, ensuring steady progress is made
- Conducted survey of wireless transceiver solutions including testing of SDR solutions such as Hack RF One

University of California Irvine, Institute of Electrical and Electronics Engineers | LTSpice **May 2025 - Present**
Engineering Project Coordinator *Irvine, CA*

- Hosted an LTSpice workshop on Power Latch circuits, teaching simulation and circuit fundamentals.
- Designing and assembling custom PCBs for DIY hardware projects, including mechanical keyboards, calculators, number pads, and flat sticks, involving schematic design, layout, PCB assembly and full hardware integration
- Led a hands-on 50+ slide workshop on ESP32 programming for fundamental servo motor control, creating custom setup guides and wiring diagrams to streamline participant onboarding and hardware interactivity

University of California Irvine IEEE Open Project Space | KiCad, Soldering, C, C++ **September 2024 - May 2025**
Embedded Systems Programmer *Irvine, CA*

- Developed embedded systems projects by designing and wiring circuits, programming ESP32 and Arduino microcontrollers in C++, and integrating common ICs and hardware components such as resistors, capacitors, inductors, buttons, and motors
- Built IoT devices using ESP32 dev boards utilizing communication protocols like I2C, SPI, and UART, as well as enabling real-time data collection and wireless transmission through ESP32 NOW.
- Designed and assembled PCBs using KiCad and soldering techniques, improving proficiency in hardware development.
- Created a remote-controlled rover as a capstone project, applying circuit design, firmware development, and debugging

PROJECT EXPERIENCE

NVIDIA Jetson Orin AI Model Deployment | AI Classification Models, Tensor RT Framework **May 2025**

- Deployed an image classification model to a Jetson Orin Nano, using Tensor RT conversion for optimization

Remote Controlled Light Switch | IoT Wireless Communication Protocols, ESP32 Programming **March 2025**

- Created light switch controller and receiver stations to control a household light switch using servo motor actuation
- Orchestrated communication to the receiver via ESP32 NOW for convenient wireless control