Teddy Kim

Portfolio: teddykimengineering.com | linkedin.com/in/teddy-kim-ct | tkim06@wesleyan.edu

TECHNICAL SKILLS

Languages: Python, C, C++, MATLAB, System Verilog, Bash
Hardware & EE: Electrical Design Software (KiCad), LTSpice, ESP32, AVR microcontrollers, IoT systems, WiFi network architecture, BLE, oscilloscope, bench power supply, multimeter, FPGAs, Arduino, Raspberry Pi
Software & Tools: Git, SvelteKit, CAD Software (Fusion 360), Linux, Microchip Studio, Arduino, Excel, Vercel
Domains: Embedded systems, AI/ML, data analysis, hardware failure analysis, troubleshooting, circuit analysis, PCB layout, product lifecycle

EDUCATION

Wesleyan University **Middletown, CT**
B.S. in Mathematics and Computer Science *Expected May 2028*

PROJECTS

Wesleyan Laundry Monitor **Deployed — 40+ Active Users**
Solo Project *March 2025 – Present*

- Built and deployed a campus-wide IoT sensor network using ESP32 and KiCad with WiFi network architecture, owning the full product lifecycle from prototype through to 2+ months of autonomous operation.
- Reduced machine state misclassification by conducting data analysis on raw accelerometer patterns and training an on-device Random Forest AI classifier, managing the complete pipeline from data collection through autonomous deployment on constrained hardware.
- Built a live analytics dashboard in SvelteKit serving real-time machine state predictions to 40+ users.

EXPERIENCE

Wesleyan University **Middletown, CT**
Electronics Course Instructor *January 2026 – May 2026*

- Designed and delivered a full-credit university course on schematic capture, PCB layout, and C++ microcontroller firmware for 10 students, making all curriculum and prioritization decisions independently.
- Provided hands-on technical support throughout the course, helping students troubleshoot hardware and firmware issues and guiding iterative problem-solving through structured written feedback.

Course Assistant — Electronics, Mechanical Design & Multivariable Calculus *September 2025 – May 2026*

- Diagnosed and resolved hardware failures across 40+ Arduino microcontrollers through component-level troubleshooting and failure analysis, keeping lab operations running continuously and saving the department $200+.
- Graded multivariable calculus homework for 34 students, providing detailed written feedback that reinforced mathematical reasoning and communication skills.

Wesleyan Engineering Club **Middletown, CT**
Lead Electrical Engineer — Drivetrain Assembly Team Lead *February 2026 – Present*

- Leading all electrical engineering for a student-built electric go-kart, owning the 48V Li-ion drivetrain system and integrating motor controller firmware over UART for a 1000W+ motor.

StatPatch **Middletown, CT**
Co-Founder, Software and Hardware Lead *January 2026 – Present*

- Co-founded a prehospital IoT wearable vitals monitor with a working EMT, driving the product lifecycle from architecture definition through sensor selection and initial schematic design. Secured early validation from the Middletown Fire Department.