

Ishaan Salian

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Education

University of Massachusetts Amherst	Amherst, MA
<i>Bachelor of Science in Computer Engineering</i>	Graduated May 2025
• Awards: Chancellor's Award, Dean's Honor Roll	
• Coursework: Digital Design, Systems Programming, Networked Embedded Systems, Low Power Embedded Systems, Computer Architecture, Synthesis and Verification of Digital Systems, Artificial Intelligence	

Technical Skills

Languages: C, C++, Python, Verilog, MATLAB, Bash

Hardware: ESP32, Raspberry Pi, Arduino, nRF52832 (ARM Cortex-M), DE1-SoC, Linux, Altium, KiCad (PCB design)

Tools: Git, GDB, RTOS, BLE, I2C, SPI, UART, Fusion 360 (CAD), Quartus Prime, Yosys, Oscilloscope, PLC

Experience

Coherent Corp.	East Granby, CT
<i>Controls/Electrical Engineering Intern</i>	June 2024 - August 2024
• Assisted with control system upgrade for a new fiber draw tower, gaining experience with PLCs, HMIs, and PID tuning	
• Investigated and resolved fiber length miscalculation caused by a software logic error, improving product consistency	
• Took initiative on side projects like designing a custom alcohol drip system to reduce friction on capstan belts	

University of Massachusetts Amherst	Amherst, MA
<i>Undergraduate Teaching Assistant</i>	Various Courses
• Assisted in courses such as Physical Computing, ECE Junior Design Project, Security Engineering	
• Guided students through topics like bare-metal programming, encryption algorithms, and hardware integration	

Projects

Workspace Wizard <i>KiCad, Fusion 360, BLE, OpenCV</i>	Senior Design Project
• Identified a common desk clutter problem and proposed a robotics-based organizational solution as our capstone project	
• Led hardware design by creating a custom ESP32-based PCB and 3D-printed robot body with servo-actuated tracks	
• Architected BLE communication between the robot and an overhead camera running object detection with OpenCV	

Weather Monitor Station <i>C, Nordic nRF52832, ePaper display</i>	April 2025
• Designed an outdoor weather monitor to track environmental data and predict storms using barometric pressure trends	
• Customized Nordic SDK firmware to periodically sample sensor data, enter deep sleep mode, and wake via interrupts	
• Chose an ePaper display for low-power, always-on data visualization, balancing readability with energy constraints	

Campus Compass <i>Python, OpenAI API, Git version control</i>	November 2024
• Developed a personalized meal recommendation system based on dietary preferences and dining hall availability	
• Led backend development using real-time data from UMass Dining APIs and dietary preferences with 82% alignment	

TinyTemp - Digital Thermometer <i>KiCad, Embedded C, ATtiny85</i>	March 2024
• Designed a PCB in KiCad, optimized for size and manufacturability, integrating an ATtiny85 with minimal components	
• Completed the build at 76% of projected cost, balancing performance with aggressive constraints	

Leadership & Organizations

Liaison - Institute of Electrical and Electronics Engineers (IEEE)	March 2024 - March 2025
• Organized 5+ joint events with engineering orgs, helping create collaborative spaces for technical talks, and workshops	
• Acted as a bridge between IEEE and other student groups, improving clarity around timelines, and funding requests	

Electronics Co-Lead - UMass Mechatronics Team (ASME)	September 2023 - May 2024
• Co-led electronics integration for a competitive mini-golf robot, including motor control and Bluetooth-based input	
• Worked closely with mechanical and software teams to synchronize movement, aiming, and power efficiency	
• Represented the team during design reviews and competition presentations; contributed to the team's top 5 placement	