

Ishaan Salian

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Education

University of Massachusetts Amherst

Amherst, MA

Bachelor of Science in Computer Engineering

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

Controls/Electrical Engineering Intern

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

Undergraduate Teaching Assistant

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 | *KiCad, Fusion 360, BLE, OpenCV*

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 | *C, Nordic nRF52832, ePaper display*

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 | *Python, OpenAI API, Git*

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 | *KiCad, Embedded C, ATtiny85*

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; contributing to a national top 5 placement