Shubaan Meyyappan

774-322-6450 | shubaan14@gmail.com | Boston, MA | Available: Jan 2027 | linkedin.com/in/shubaan7
Portfolio: shubaanmeyyappan.com | github.com/Shubaan7 | Open to Relocate

SUMMARY

Computer Engineering senior graduating December 2026, with hands-on experience writing and debugging embedded C/C++ firmware and building test procedures and documentation on real competition and medical device projects. Comfortable across the full stack: firmware, test fixture development, and field debugging.

EDUCATION

Wentworth Institute of Technology, Boston MA *Anticipated Dec 2026*

Bachelor of Science, Computer Engineering | GPA 3.1

Relevant Courses: Advanced Digital Circuit Design, Computer Architecture, Analog Circuit Design, Microcontrollers Using C, Feedback and Controllers, Operating Systems, Signals and Systems

TECHNICAL SKILLS

Programming & Scripting: C, C++, Python, MATLAB, Verilog, Assembly, JavaScript, TypeScript, Bash, React, Node.js, Flask, PostgreSQL
CAD & EDA Software: Onshape (CAD), 3D prototyping, LTSpice, KiCad, Intel Quartus Prime, ModelSim, Multisim, Cadence, Git/GitHub, Linux/Bash
Embedded & Test: ESP32/ESP32-S3, DE10-Lite FPGA, Arduino, Raspberry Pi 5, UART, ESP-NOW, Wi-Fi (AP), OTA updates, SPI, I2C, GPIO, ADC, oscilloscope, function generator, power supply, bench soldering

WORK EXPERIENCE

Technical Support Engineer, Field Support | Harvard University IT, Boston MA *Aug 2026 - Dec 2026*

- Diagnosed and repaired hardware and software faults on Harvard-managed Windows and Mac devices in person across multiple departments, working a scheduled ticket queue in ServiceNow.
- Imaged and set up laptops and desktops using JAMF (Mac) and SCCM (Windows), and resolved driver, BIOS and update failures during setup.
- Troubleshot network connectivity and application issues on site, and escalated hardware failures to vendor repair with a write-up of what was tested.

Wellness Residential Assistant (RA) | Wentworth Institute of Technology *June 2024 - April 2026*

- Designed and led 35+ wellness programs for 100+ residents; earned the Wellness Advocate Certificate of Achievement and a nomination for the Outstanding Junior Leadership Award.

Enrollment Services Assistant | Wentworth Institute of Technology *Sept 2024 - April 2026*

- Processed student application records for 1000+ applicants a year in ServiceNow and Slate CRM, under FERPA rules.

TECHNICAL PROJECTS

Speedometer & DAQ System | SAE Baja Leopard Racing Team *Jan 2024 - Present*

- Architected a dual-ESP32 DAQ in C/C++ with interrupt-driven pulse counting, checksummed UART telemetry, and Zener-protected inputs.
- Debugged low-level firmware and hardware faults under time pressure, including cold solder joints, reverse-biased protection diodes, and intermittent power rails, using a multimeter and oscilloscope.
- Led a 4-person electrical team on BOMs, wiring, and a documented UART protocol and OTA update process for long-term maintainability.

Embedded Gait Analysis Insole, StepArc | Senior Capstone *Spring 2026 - Present*

- Wrote ESP32-S3 firmware in C/C++ for 8-channel ADC sampling and a bilateral ESP-NOW wireless link, with a hardware watchdog, OTA updates, and a Wi-Fi access point serving a live dashboard.
- Designed a custom 2-layer mixed-signal PCB in KiCad (8-channel transimpedance front end, charge-pump reference, castellated XIAO ESP32-S3).
- Designed a test fixture and characterized sensor response on an Instron load frame.
- Selected as a finalist for the IEEE EMBS Boston Chapter 2026 Senior Capstone Award; journal article for MDPI Sensors in progress.

Programmable Gain Amplifier | In the works for an IEEE conference *Nov 2025 - Present*

- Built a nine-state PGA comparing Si, GaN, and SiC FETs as analog switches, and built a MATLAB/Simulink model of the circuit.
- Wrote a firmware-driven test sequence to automate state advancement and data capture.

Kinnections | AI Career Fair Platform | getkinnections.floot.app *Jan 2025 - Present*

- Designed a full-stack AI web app (React, TypeScript, Node.js, PostgreSQL) that helps students and employers connect at career fairs; set the architecture, data model and AI prompts, and directed AI coding tools to write the code.
- Won $3,000 in competitive grant funding.

Antikythera, Astronomical Event Browser | Course Project, Team Lead *May 2026 - Aug 2026*

- Led a 9-person team building a Python Flask web app that draws the solar system for any date and lists nearby astronomical events.

LEADERSHIP & ACTIVITIES

Pre-College Program Assistant / Mentor | Wentworth Institute of Technology *2024 - 2025*

- Mentored 30+ high school students across two summer cohorts, designing residential experience programming.

IEEE Club @ Wentworth | Member *2024 - Present*

- Attended technical workshops and networking events to stay current on trends in embedded systems and power electronics.