Vasishta Malisetty

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Available January – August 2025

EDUCATION

Northeastern University, Boston, MA — May 2026
Bachelor of Science (BS), Electrical and Computer Engineering — **GPA**: 3.85
Relevant Coursework: Electronics, Circuits and Signals, Embedded Design, Algorithms, Digital Design and Computer Organization, Linear Systems, Networks, Discrete Structures, Probability and Statistics, Differential Equations and Linear Algebra
Activities: Generate Product Development Studio, Tau Beta Pi Engineering Honors Society, John Martinson Honors Program

TECHNICAL SKILLS

Hardware: PCB Schematic Design and Layout, Arduino, Oscilloscope, Multimeter, Soldering
Programming Languages: C++, Python, NI LabVIEW, MATLAB, SystemVerilog, RISC-V
Tools: KiCAD, Git, Linux, LTspice, Solidworks, AutoCAD, Microsoft Office

WORK EXPERIENCE

Raytheon — Jun. 2024 – Present
Systems Engineering Intern — Marlborough, MA

Philips — Jan. 2024 – Jun. 2024
Hardware Test Engineering Co-op — Andover, MA

- Automated hardware test fixtures using NI LabVIEW to qualify Philips patient monitoring products against international reliability standards, saving Philips over 170 hours per product requiring validation
- Programmed instrument drivers and state machines to remotely control five USB, GPIB, and serial hardware peripherals
- Designed user-friendly control panels for test fixtures, enabling non-technical Philips employees to conduct hardware reliability testing and saving $3090 per employee on LabVIEW training
- Soldered wire harnesses to connect test fixtures with a custom PCB, enabling autonomous data collection and analysis from hardware testing to validate Philips products
- Built installer packages for test fixture software, expanding hardware testing capabilities to two more Philips locations
- Performed HALT testing on Philips prototypes to pinpoint critical failure modes and drive targeted design improvements, resulting in a 20% increase in product service life

Rite Aid — June 2023 – Aug. 2023
Data Security Intern — Hopkinton, MA

- Optimized Rite Aid's network protection software by scripting 1119 Invoke-Atomic Red Team tests using PowerShell and developing custom security alerts for telemetry gaps, improving Rite Aid's security infrastructure
- Created 34 RegEx patterns for use in Rite Aid's threat monitoring software by investigating 532 unidentified Indicators of Compromise associated with prominent ransomware groups, successfully blocking a malware attack

PROJECTS

C-STAR: Autonomous Concrete Sounding Robot — Jan. 2024 – Apr. 2024

- Developed an autonomous concrete sounding robot that detects delaminations in concrete structures
- Designing a custom PCB with an ESP32 microcontroller and H-Bridge Motor Drivers to control brushed DC drive motors using industry-standard PWM control signals
- Developed odometry and PID algorithms using C++ to schedule interrupts to read quadrature encoder data, calculate velocity and distance parameters, and send movement commands through Bluetooth to drive the robot

SEBIK: Automated Tabletop Injection Molder — Sept. 2023 – Dec. 2023

- Developed an automated tabletop injection molder to produce one common medical product every four minutes to address medical supply shortages in rural hospitals nationwide
- Designing a custom PCB with N-channel MOSFETs to control pneumatic pistons and an ATmega328PB microcontroller to regulate airflow, enabling the device to inject 10.45 grams of molten polypropylene every four minutes
- Analyzed potential failure modes within the injection ram subsystem using a DFMEA and developed exception handling mechanisms using C++, ensuring user safety throughout the injection process