Vasishta Malisetty

malisetty.v@northeastern.edu | (724) 420-0353 | linkedin.com/in/vmalisetty | vasishta-malisetty.netlify.app
Available for Co-op 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, John Martinson Honors Program, Intramural Soccer

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
Systems Engineering Intern   Marlborough, MA

Philips   Jan. 2024 – Present
Hardware Test Engineering Co-op   Andover, MA
- Automated hardware lifecycle test fixtures using NI LabVIEW to qualify Philips patient monitoring products against international reliability standards, saving Philips over 170 hours per product requiring validation
- Performed HALT testing on Philips patient monitoring prototypes to pinpoint critical failure modes and formulate design improvements, resulting in a 20% increase in product service life
- Developed five instrument drivers for a 32 SPDT relay board, linear actuator, DC stepper motor, power supply, and load cell, allowing the computer to power and control the hardware peripherals via USB, GPIB, and COM ports
- Designed user-friendly control panels for the hardware lifecycle test fixtures, saving Philips $3090 per employee on LabVIEW training by enabling untrained Philips employees to operate the test fixtures
- Soldered wire harnesses to connect a relay board and load cell with a PCB screw terminal block, enabling autonomous collection and analysis of insertion force and contact resistance measurements for 20,000 cycles

Rite Aid   June 2023 – Aug. 2023
Data Security Intern   Hopkinton, MA
- Scripted 1119 Atomic Red Team tests using PowerShell, pinpointing gaps within Rite Aid's network protection software
- Formulated 34 regex patterns for use in Rite Aid's endpoint security integrations by investigating 532 unidentified Indicators of Compromise associated with emerging ransomware groups, successfully detecting a malware threat

PROJECTS

C-STAR: Autonomous Concrete Sounding Robot   Jan. 2024 – Apr. 2024
- Collaborated with a multidisciplinary team of 13 engineers in developing an autonomous concrete sounding robot that detects delaminations in concrete structures
- Owned the drivetrain subsystem by 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
- Collaborated with a multidisciplinary team of 12 engineers in developing an automated tabletop injection molder to produce one common medical product every four minutes to address medical supply shortages in hospitals nationwide
- Owned the injection ram subsystem by designing a custom PCB with N-channel MOSFETs and an ATmega328PB microcontroller to control pneumatic pistons, enabling molten polypropylene to be injected every four minutes
- Developed exception handling mechanisms in C++ after analyzing potential failure modes within the injection ram subsystem using a DFMEA, ensuring user safety throughout the injection process