Vasishta Malisetty

malisetty.v@northeastern.edu | (724) 420-0353 | linkedin.com/in/vmalisetty | Portfolio: vasishta-malisetty.netlify.app

EDUCATION

Northeastern University (Boston, MA) Sept 2022 - May 2026
Candidate for Bachelor of Science in Electrical and Computer Engineering **GPA**: 3.88
Activities: Generate Product Development Studio, John Martinson Honors Program, Intramural Soccer
Coursework: Fundamentals of Electronics, Circuits & Signals, Algorithms, Digital Design, Embedded Design, Networks, Linear Systems

TECHNICAL SKILLS

Hardware: Circuit Design, PCBA Design, Altium, KiCAD, Oscilloscope, Multimeter, Function Generator, Soldering, Arduino, LTspice, PSpice
Software: C++, Python, MATLAB, LabVIEW, Git, Linux

WORK EXPERIENCE

Amazon Robotics Jan 2024
Incoming System Development Engineering Co-op North Reading, MA

Raytheon Jun – Aug 2024
Systems Engineering Intern Marlborough, MA

- Generated virtual simulations using Jenkins to debug Raytheon's SPY-6 naval radar software, reducing radar testing expenses
- Created scenarios using MATLAB to test the SPY-6 radar's ability to identify and track common electronic attack patterns, neutralizing the effects of these attacks on the radar
- Organized useful scenario generation tools across various Raytheon teams into one PowerPoint deliverable using ClearCase, allowing 66% of the SPY-6 department to learn the scenario generation process within two months

Philips Jan – Jun 2024
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
- 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
- Soldered wire harnesses to connect a relay board, load cell, and power supply with a PCB screw terminal block, enabling autonomous collection of insertion force and contact resistance measurements for 20,000 cycles
- 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
- Performed highly accelerated life testing on Philips patient monitoring prototypes to pinpoint critical failure modes and formulate design improvements, resulting in a 20% increase in product service life

Rite Aid Jun – Aug 2023
Data Security Intern Hopkinton, MA

- Scripted 1119 Atomic Red Team tests using Linux, 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

PROJECT & LEADERSHIP EXPERIENCE

Sensify: Modular Virtual Reality Controller – Lead Electrical Engineer Aug – Dec 2024

- Led a team of 12 engineers in the electrical development of a modular virtual reality controller, addressing the need for realistic tool-based haptic feedback to enhance virtual reality training simulations
- Designed and integrated the battery management system, haptics network, and modular tool attachments into three small form factor PCBs using an ESP32 microcontroller, DRV2605 haptic drivers, and buck convertors
- Developed a state machine in C++ to manage haptic feedback, analyze sensor data, and enable Bluetooth & HID communication between the controller and virtual reality simulation

C-STAR: Autonomous Concrete Sounding Robot – Hardware Engineer Jan – Apr 2024

- Created an autonomous concrete sounding robot that detects delaminations in concrete structures
- Owned the drivetrain subsystem by designing a custom PCB with KiCad, integrating H-Bridge Motor Drivers and an ESP32 microcontroller to control brushed DC drivetrain motors with 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