Vasishta Malisetty

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EDUCATION

Northeastern University (Boston, MA) May 2026
Candidate for Bachelor of Science in Electrical and Computer Engineering **GPA**: 3.85
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 (KiCAD), Oscilloscope, Multimeter, Soldering, Arduino, LTspice
Programming Languages: C++, Python, Git, MATLAB, NI LabVIEW, Linux, SystemVerilog

WORK EXPERIENCE

Raytheon Jun – Aug 2024
Systems, Integration, and Test 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
- Implemented 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, 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
- 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 – Generate Lead Electrical Engineer Aug 2024 – Present

- Lead a team of five engineers in the electrical development of a modular virtual reality controller that enhances user haptics
- Integrate the Battery Management, Microcontroller, Haptics, and Sensor subsystems into a small form factor PCB

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

- Created an autonomous concrete sounding robot that detects delaminations in concrete structures
- Designing a custom PCB with an ESP32 microcontroller and H-Bridge Motor Drivers using KiCAD 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

SEBIK: Automated Tabletop Injection Molder – Generate Hardware Engineer Sept – Dec 2023

- Built an automated tabletop injection molder to produce one common medical product every four minutes to address medical supply shortages in rural hospitals
- Designed a custom PCB with N-channel MOSFETs and an ATmega328PB microcontroller using KiCAD to control pneumatic pistons within the injection ram subsystem, enabling molten polypropylene to be injected every four minutes
- Programmed 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

INTERESTS

Product Development, PCBA Design, Pittsburgh Steelers, Chelsea FC, Chess, Basketball