

Vasishta Malisetty

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Available January – August 2025

EDUCATION

Northeastern University, Boston, MA May 2026
Candidate for Bachelor of Science in Electrical & Computer Engineering GPA: 3.85
Relevant Coursework: Circuits & Signals | Embedded Design | Digital Design & Computer Organization | Networks | Discrete Structures | Probability and Statistics | Differential Equations and Linear Algebra
Activities: Generate Product Development Studio (Hardware Engineer), University Honors Program, Intramural Soccer
Interests: PCB Design, Embedded Systems, Sensors, Pittsburgh Steelers, Chelsea FC, Chess

TECHNICAL SKILLS

Programming Languages: C++, Python, MATLAB, NI LabVIEW, SystemVerilog, Assembly
Platforms/Tools: Linux, Git, KiCAD, LTspice, Xilinx Vivado, Quartus Prime
Hardware: PCB Schematic Design & Layout, Microcontroller, FPGA, Arduino, Oscilloscope, Multimeter, Soldering

WORK EXPERIENCE

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

- Develop automated test systems using NI LabVIEW to qualify Philips products against international standards, reducing pre-market approval times by 60% and lowering development costs by \$150,000
- Conduct reliability testing on Philips patient monitoring products using H.A.L.T. systems to identify critical failure modes and formulate design improvements, increasing product service life by 20%

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

- Scripted 1119 Invoke-Atomic Red Team tests using PowerShell and developed custom security alerts on telemetry received from CrowdStrike Falcon, improving Rite Aid's defensive capabilities
- Investigated 532 unidentified Indicators of Compromise and formulated unique regex patterns for use in Rite Aid's endpoint security integrations, successfully preventing a critical security breach

PROJECTS

C-STAR: Autonomous Concrete Sounding Robot Jan. 2024

- Design hardware for an autonomous concrete sounding robot that detects delaminations in concrete structures
- Create a custom PCB integrating an ESP32 microcontroller and Lidar sensor to accurately map the robot's surroundings
- Develop odometry and PID algorithms to autonomously drive the robot using Ubuntu, FreeRTOS, microROS, and C++

SEBIK: Automated Tabletop Injection Molder Sept. 2023

- Developed an automated tabletop injection molder seeking to provide a solution to medical supply shortages by rapidly producing common medical products on demand
- Designed a custom PCB using KiCAD to receive sensor readings and control solenoids with an ATmega328PB microcontroller, allowing 10.45 grams of molten polypropylene to be injected every four minutes
- Analyzed potential failure modes within the injection ram subsystem using a DFMEA and developed robust error handling mechanisms using C++, ensuring user safety throughout the injection process

HeatWave: Contactless Stovetop Sept. 2023

- Collaborated with an interdisciplinary team of 8 engineers in developing a contactless stovetop that allows the user to control the stovetop using hand gestures
- Engineered ultrasonic motion detectors using C++ and Arduino, improving cooking efficiency by allowing users to precisely switch between five distinct heat settings

Python Chess Engine May 2023

- Programmed a chess engine from scratch using Python and PyGame, allowing the user to play matches against the 1000 ELO engine
- Implemented an intuitive user interface with customizable board color schemes and automatic algebraic notation, enhancing user experience