Vasishta Malisetty

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Available June – August 2024

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, Hardware Engineering, Embedded Sensors, Chess

TECHNICAL SKILLS

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

WORK EXPERIENCE

Philips, Andover, MA
Hardware Reliability Engineering Co-op   *Jan. 2024 – Present*
- Develop automated test systems to qualify Philips products against international standards using LabVIEW, reducing pre-market approval times, and lowering R&D costs
- Perform reliability tests on Philips patient monitoring products using H.A.L.T. & H.A.S.S. systems, increasing product service life by 20%

Rite Aid, Hopkinton, MA
Data Security Intern   *June 2023 – Aug. 2023*
- Conducted 1119 Atomic Red Team tests by using the Invoke-Atomic framework and generating threat intelligence reports on telemetry received from CrowdStrike Falcon, improving Rite Aid's overall security posture
- Delivered 532 unidentified Indicators of Compromise (IoCs) to the Anomali ThreatStream Database by parsing threat intelligence reports on multiple Ransomware groups, successfully preventing a 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 with an ESP32 microcontroller to interface with a LiDAR sensor and accurately map the surroundings of the robot
- 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 with an ATmega328PB microcontroller using KiCAD to receive sensor readings and control solenoids, allowing 10.45 grams of molten polypropylene to be injected every four minutes via pneumatic cylinders
- Identified potential failure modes within the injection ram subsystem and developed appropriate error handlings using C++, ensuring user safety throughout the injection process

HeatWave: Contactless Stovetop   *Sept. 2023*
- Collaborated with an interdisciplinary team of 6 engineers in developing a contactless stovetop that allows the user to control the heat applied using hand gestures
- Developed ultrasonic motion detectors using C++ and Arduino, allowing users to rapidly switch between five distinct heat settings

Python Chess Engine   *May 2023*
- Developed a chess engine using Python and PyGame, allowing the user to play matches against the 1000 ELO engine and customize the board color scheme