Vasishta Malisetty

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Available January – August 2025

EDUCATION

Northeastern University, Boston, MA   *Expected May 2026*
Bachelor of Science in Electrical & Computer Engineering   *GPA*: 3.85
Relevant Coursework: Circuits & Signals, Embedded Design, Digital Design & Computer Organization, Networks, Discrete Structures, Probability & Statistics, Differential Equations & Linear Algebra
Activities: Generate Product Development Studio, University Honors Program, Intramural Soccer

TECHNICAL SKILLS

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

WORK EXPERIENCE

Philips, Andover, MA
Hardware Test Engineering Co-op   *Jan. 2024 – Present*
- Automate test fixtures using LabVIEW to test Philips patient monitoring products against international standards, saving Philips over 170 hours per product requiring validation
- Perform reliability testing on Philips products using HALT testing systems to identify critical failure modes and potential design improvements, increasing product service life by 20%

Rite Aid, Hopkinton, MA
Data Security Intern   *June 2023 – Aug. 2023*
- Optimized Rite Aid's network protection software by scripting 1119 Invoke-Atomic Red Team tests using Linux and developing custom security alerts for telemetry gaps, improving Rite Aid's security infrastructure
- Created 34 RegEx patterns for Rite Aid's threat monitoring software by investigating 532 unidentified Indicators of Compromise associated with prominent ransomware groups, successfully blocking a malware attack

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 to collect encoder position data and control DC drive motors using an ESP32 microcontroller
- Develop odometry and PID algorithms to autonomously navigate the robot using FreeRTOS 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 one common medical products every four minutes
- Designed a custom PCB to receive pressure sensor readings and control pneumatic solenoid valves using an ATmega328PB microcontroller, allowing 10.45 grams of molten polypropylene to be injected per cycle
- 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 a group of eight engineers to develop a contactless stovetop that allows the user to control the stovetop using hand gestures
- Built 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*
- Developed 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