Ethan Meleen

716-489-6464 | EthanFMeleen@gmail.com | ethanmeleen.com

Education

Cornell University Ithaca, NY
Bachelor of Science in Electrical and Computer Engineering *2022*

Experience

Electrical Engineer June 2024 – Present
Lockheed Martin (Contractor via Actalent) *Syracuse, NY*

- Provided engineering support for MK48 G&C production
- Troubleshot a variety of PCBAs to the component level and made rework recommendations
- Conducted root cause analysis of a failure trend and recommended corrective action
- Led failure review board (FRB) investigations and wrote FRB reports to be submitted to the customer

Electrical Engineering Intern Sep. 2020 – Aug. 2020
SKF Aeroengine *Falconer, NY*

- Refactored report generation program written in Tcl and Tk that was used daily by members of multiple teams
- Optimized the structure of the program using functional programming increasing its modularity and decreasing its length and complexity
- Updated documentation to allow for easier modification of the program in the future
- Decreased machine downtime by handling software installation and license management on manufacturing laptops

Lab Technician Feb 2019 – Jan 2020
SKF Aeroengine *Falconer, NY*

- Performed hot-acid etching on bearing ring sections and carried out x-ray diffraction testing on the exposed subsurface at various depths to measure residual stress and retained austenite
- Worked as part of a large team in a fast-paced laboratory environment and maintained workspace tidiness according to the 5S methodology
- Sequenced work carefully so that testing on high-priority ring sections could be completed quickly on short notice

Projects

Oven Characterization System | *Bare-metal STM32, C, Python, Tkinter* 2025

- Collected data from an array of thermocouples over SPI using an STM32 microcontroller
- Displayed the current temperature of each thermocouple on a small LCD screen
- Sent temperature data over UART to a computer where the oven's status was displayed in a Python GUI
- Wrote interrupt-driven code to allow the processor to handle the above tasks concurrently while complying with the timing constraints of each task

Pathfinding Robot | *C* May 2018 – May 2020

- Designed and built a wheeled, autonomous robot controlled by a microcontroller
- Developed an autonomous navigation algorithm in C which used information from three ultrasonic sensors to map and traverse a randomized maze
- Detected radio beacons scattered throughout the maze using the FFT algorithm and used a pair of RF transceivers to transmit the beacon's location to a second Arduino

Technical Skills

Languages: C, Python, Java, HTML, CSS, Javascript
Tools: Oscilloscope, Logic Analyzer, Digital Multimeter (DMM), Function Generator, JTAG Debugger
Developer Tools: Git, Jira, VS Code, Eclipse, Tkinter
Other Skills: Electrical Troubleshooting, Soldering, Schematics, Root Cause Analysis