TAONGA MWAKA PUMULO

Rochester, NY | tmp5720@rit.edu | (585) 629-3848

SUMMARY

A motivated Computer Engineering Technology student with hands-on R&D co-op experience developing and validating firmware for production hardware. Seeking full time Engineering role.

TECHNICAL SKILLS

Software: Modelsim, MATLAB, Quartus Prime, Eclipse IDE, Minitab, VS/Code, Git/Github, STM Cube IDE
Programming: C, C++, Embedded C, VHDL, Arduino, Assembly, Linux, Bash
Boards: Intel/Altera DE0-CV FPGA, DE1-SoC, Arduino TI-84, MSP432P401R, STM32F411
Lab equipment: Multimeter, Oscilloscopes, Soldering Iron, Bread boards, Spectrum Analyzers
Methods: Unit testing, CLI/Bash, Agile/Scrum

EXPERIENCE

Qualitrol Corporation | R&D Engineering Co-op **June 2024 - July 2025**

- Developed, updated, and validated C++ firmware for production hardware as part of product upgrade initiatives
- Debugged and verified firmware bug fixes to improve system reliability and communication stability.
- Implemented and tested device communications using MODBUS TCP/IP, DNP3, and RS-485
- Created detailed bills of materials (BOMs) for multiple printed circuit boards to support manufacturing and sourcing
- Automated cell build operations, increasing manufacturing efficiency and reducing manual workload
- Authored and reviewed manufacturing engineering instructions and standard operating procedures
- Participated in daily scrum meetings, contributing to sprint planning and progress updates

Rochester Institute of Technology | Recreation Student Manager **May 2022 - Present**

Promoted from Rec Attendant to Student Building Supervisor to Recreation Student Manager

- Worked with professional staff to efficiently execute, supervise and manage facility operations
- Provide assistance and leadership to Recreational staff

PROJECTS

Delivery Rover:

- Designed and documented a rover, mapped to specific room, that held a 3D-printed storage tray to take items from the current user to the next.
- Programmed powered motors, hardware interrupts and timers and infrared sensors to ensure pin point accuracy

Reservation System

- Designed and documented a vehicle reservation system built to accommodate customers' needs based on vehicle type required and points able to be spent.

Breathing Rate Monitor

- Utilized a LM61 temperature sensor and Arduino board to detect breathing rate of pneumonia patients
- System was tested and simulated in MATLAB before building in Arduino code

EDUCATION

Rochester Institute of Technology University **2021 - 2026**

Computer Engineering Technology (BS) 2021 - 2026

- Recipient of RIT Presidential Scholarship
- Minor in Photography

ACTIVITIES

- RIT Men's Varsity Rowing - Compete in collegiate rowing in NCAA Division III Liberty League
- RIT Club Swimming - Compete in collegiate swimming in College Club Swimming Master's League.