Daniel DeGrasse

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Objective

To work in an environment that allows me to help develop innovative products and features, while improving my skills in embedded programming, electrical engineering, and software design. I am particularly interested in firmware and driver design.

Education and Awards

Rice University, Electrical Engineering

- May 2021
- 3.81 GPA, Cum Laude

Programming Experience

- C, ARM ASM, Objective-C, Python, Java, and JavaScript

Tools/Standards

- Proficient with RTOS concepts, SPI, UART, Git, and Linux administration
- Familiar with UEFI/EDK2, MongoDB, and Angular
- Familiar with asymmetric cryptography libraries and standards

Awards

- Eagle Scout (2016)

Work Experience

NXP Semiconductors (Aug 2021- Present)

- Work to support Zephyr RTOS on NXP MCUs
- Implemented support for low power operation in iMX.RT line
- Added dual core support for RT1170 crossover MCU series in Zephyr

Dell Technologies (Summer 2020)

- Gained experience with a RTOS, as well as JTAG debugging tools
- Enabled web-based management of peripherals within product assurance lab

Dell Technologies (Summer 2019)

- Gained experience with UEFI Firmware development, including SMM Drivers
- Knowledge of the UEFI boot process and associated security considerations
- Worked with Asymmetric Cryptography standards including RSA-PSS

Projects

Bare Metal RTOS (C)

- Bare metal RTOS for Cortex-M with task priority, preemption, semaphores, and task delays
- Includes logging system, and bare metal drivers for STM32 Nucleo-64 evaluation kit

Serial Logging System (C)

- Developed TI RTOS application for Cortex-M4F processor to log serial input to an SD card
- Supports command line over second serial connection, and makes use of several RTOS tasks

References

Marcin Nowak – Marcin_N@dell.com, Dell Technologies

- Project architect for summer 2020 project within Dell

Brad Sprague - bsprague@austin.rr.com

- Scoutmaster of my troop, as well as my Eagle Scout advisor