NOAH LEE

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SUMMARY

Design Engineer with a background in Computer Engineering, specializing in embedded systems development, firmware, and full-stack application design. Proven ability to develop and implement robust solutions for industrial automation using C, Rust, and Dart/Flutter.

EDUCATION

Rose-Hulman Institute of Technology *Terre Haute, IN*
Bachelor of Science in Computer Engineering Graduated: May 2024

PROFESSIONAL EXPERIENCE

FACTS Engineering LLC July 2024 – Present
Design Engineer *New Port Richey, FL*

- Led full-cycle development of I/O modules for use in industry (schematics, UL compliance, part selection) and firmware (C, industrial protocols), including product lifecycle management (redesigns, value engineering).
- **Unreleased IoT Device Firmware** (November 2024 – Present): Developed FreeRTOS-based firmware in C for a remote Modbus TCP I/O slave, architecting the network stack and a modular I/O module sign-on sequence.
- **IoT Device Configuration App** (November 2024 – Present): Designed and developed a cross-platform Flutter application for configuration and real-time monitoring of the I/O slave, utilizing UDP multicasting and TCP communication.
- **Rust-based PLC Driver for RP2350** (September 2024 – November 2024): Ported our open-source Arduino PLC driver to the Raspberry Pi RP2350 microcontroller, re-implementing core logic in Rust utilizing the Embassy (async) framework for enhanced performance and safety.

Milwaukee Tools June 2023 – August 2023
Firmware Engineering Intern *Brookfield, WI*

- Developed code in C and C++ to modernize firmware with new features for use in new hardware.
- Created and executed a detailed test plan to validate feasibility and implementation of new features.

PERSONAL PROJECTS

"AudSpec Pico" Summer 2022 – Winter 2022
Multicore Audio Spectrometer on RP2040 Board

- Written in Arduino/C++ for Raspberry Pi Pico board; interfaces with peripherals such as 3.5mm audio, I2C display, and ADC GPIO for FFT calculations to display audio data by frequency.

TECHNICAL SKILLS

Languages	C, Rust, Python (Scripting), Java, Dart (Flutter)
RTOS	FreeRTOS, Rust Embassy
Hardware	Verilog HDL, MCU (STM32, RP2350), FPGA, Picoscope, Hardware Debugging
Protocols & APIs	Modbus TCP, TCP/IP, UDP, I2C, (REST - if still relevant)
Tools	Git, VS Code, Pads Logic, Altium, IAR, Vivado, Android Studio