Thomas Schmidt

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Objective

Seeking a Summer 2025 internship in embedded systems or power engineering where I can apply hands-on experience with Rust, FPGA development, and SCADA simulation tools.

Core Competencies: Embedded Systems — Rust — FPGA Design — SCADA Simulation — Power Systems

Education

University of Idaho, Moscow, ID
Bachelor of Science in Computer Engineering Expected December 2025

Technical Skills

- **Programming Languages:** Rust, Python, C, C++, GDScript, Java, Bash, R, NetLogo
- **Hardware Description Languages:** VHDL, Verilog, AVR (ATmega328), MIPS32 (PIC32)
- **Software**
  Tools: Git, VS Code, Vivado 2016.4, Cadence, Microsoft Excel/PowerPoint
- **Systems:** Linux, WSL, Docker, Kubernetes
- **Engineering Concepts:** Embedded systems, electrical circuits, FPGAs, power systems, relays

Experience

Capstone Project – Project Lead Spring 2025 – Present

- Leading a team in designing and implementing a low-cost Modbus/DNP simulation device using Raspberry Pi units.
- Creating configuration tools and data generation interfaces to emulate substation IEDs polled by an SEL RTAC.
- Managing configuration distribution, real-time communication over Ethernet/RS-232, and SD card storage.

Painter – Flats @ Terre View LLC, Pullman, WA May 2022 – Present (Summers)

- Painted interior walls and ceilings of apartments with precision and attention to detail.

Sides Cook – Panda Express, Moscow, ID August 2022 – Present

- Prepared side dishes to order and for food lines, managing high-volume orders efficiently.

Assistant Manager – Little Caesars, Coeur d'Alene, ID August 2019 – March 2020

- Led a team in customer service, inventory, and daily operations.

Contractor – Hoffman LLC, Coeur d'Alene, ID Sept 2018 – June 2019, Summer 2021

- Installed roofs and gutters with focus on safety and structural quality.

Projects

Mealy FSM GCD Implementation (Vivado 2016.4)

- Designed a GCD algorithm using a Mealy FSM and implemented it on a Zybo FPGA.
- Interfaced via physical switches and buttons for demonstration and testing.

Multithreaded Producer-Consumer System in Rust

- Built a file-based producer-consumer system using Rust threads and channels for synchronization.
- Emphasized safety and concurrency using Rust's type system and ownership model.

AI-Powered Chess Application – Rust / Programming Languages Project

- Developing an AI chess engine in Rust for academic evaluation of programming language paradigms.
- Implementing rule enforcement, game state handling, and AI move generation.

Certifications
Achievements

- Adobe Certified Professional (Photoshop, Illustrator)
- Eagle Scout – Led construction of an announcer box for Finucane Park, Hayden, ID

Leadership
Involvement

- Capstone Project Lead – Coordinating embedded software and mechanical design teams.
- Musician – 18 years piano, trumpet in marching band, jazz band selectee.

Additional Information

Open to part-time roles during the academic year and full-time opportunities in the summer. Passionate about embedded systems, power engineering, and delivering reliable, real-world solutions.