JARED MOULTON

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EDUCATION

Utah State University **Logan, Utah**
Bachelor of Science in Computer Engineering May 2025
- **Courses**: Embedded Real Time Operating Systems, Microcontrollers, Compiler Architecture, Reconfigurable Computing, Computer Systems Programming and Architecture, Technical Writing, Pinciples of Cyber Physical Systems, Computer Networks

WORK EXPERIENCE

Baker Hughes **Remote / Minden, Nevada**
Firmware Engineer May 2022 – Aug 2024
- Led a team of 3 engineers to sucessfully build an embedded, high performange, internal testing tool in 6 months
- Designed, developed, and deployed a cross-platform GUI, enabling low-latency configuration of an embedded system
- Developed drivers for I2C, UART, and an async STM32 I2C slave implementation
- Developed a USB communication protocol to maximizes wire efficiency and memory optimization
- Contributed to hardware design enhancements through targeted, constructive feedback
- Significantly increased the performance of dual-channel direct digital synthesizer firmware, achieving a speed improvement of over 100x

Utah State University **Logan, Utah**
Microcontrollers Lab TA Aug 2024 – Dec 2024

Fox Pest Control **Albany, New York**
Sales Associate May 2021 – Aug 2021
- Gained experience in sales processes and techniques by consistently closing sales
- Enhanced negotiation skills through direct customer interactions, generating over $50,000 in revenue

PROJECTS

Open Source, High Performance, Cross Platform GUI Library
- Organize and push development forward as a core maintainer
- Lead the transition to a new, high performace 2D renderer
- Built and integrated a high performance, flexible keyframe animation engine, including spring animations
- Contribute regularly, focusing on API ergononics and developer experience
- Perform code review for external contributions

STM32 I2C Remote Controlled Robot
- Implemented an I2C driver for an accelerometer controller
- Implemented a PWM driven driver for a motor controller
- Implemented all STM32 peripheral control without a hardware abstraction layer

Compiler
- Designed and built an interpreter and compiler for a custom programming language
- Developed a custom virtual machine
- Implemented robust error handling and clear user feedback
- Utilized test driven development to ensure correctness

SKILLS, LANGUAGES, INTERESTS

- **Programming Languages and Frameworks**: C, C++, Rust, Python, Java
- **Hardware Description Languages**: Verilog, VHDL
- **Equipment**: Oscilloscope, Logic Analyzer, STM32, FPGA
- **Other**: FreeRTOS
- **Languages**: English (Native speaker), Spanish (Fluent)
- **Interests**: Programming, Mountain Biking, Skiing, Family