Shion Britten

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Education

Oregon State University, BS in Electrical & Computer Engineering — Sept 2022 – August 2026 (expected)

- GPA: 3.65/4.0
- Dual-enrolled in graduate-level coursework toward MEng in Electrical & Computer Engineering
- **Coursework:** Power Electronics, Analog Integrated Circuits, Electric Machines, Signals & Systems, Data Structures, Computer Architecture

Experience

Engineering Intern, Mitsubishi Fuso Truck and Bus Corporation – Kawasaki, Japan — Jul 2024 – Nov 2024

- Performed electrical validation and data-driven testing of ECUs, supporting new product introduction cycles for commercial vehicle platforms.
- Developed MATLAB script for displaying physical values of driving test CAN signals, improving accuracy of ECU function validation.
- Designed and executed prototype test plans using HiL systems, validating communication across >200 CAN signals and maintaining detailed product history documentation.
- Executed high-volume production test and update procedures onto 300+ ECUs with 100% accuracy, ensuring high-yield manufacturing continuity.
- Facilitated cross-functional collaboration by translating technical documentation and engineering discussions between English and Japanese-speaking teams, improving communication efficiency across R&D groups.

Projects

Hands-free Kitchen Timer — beav.es/xEx

- Designed a custom PCB integrating an ESP32 MCU, proximity sensor, and I2C peripherals; performed hardware bring-up, signal validation, and prototype testing.
- Tools Used: KiCad, C++

Rock-papers-scissors in AVR Assembly — Mar 2025

- Implemented real-time embedded system using AVR Assembly, including serial communication, timing analysis, and hardware-level signal control.
- Tools Used: AVR Assembly, Microchip Studio

Custom Alarm Clock on FPGA — June 2024

- Built FPGA-based digital system in SystemVerilog, performing timing analysis, logic verification, and simulation debugging using ModelSim.
- Tools Used: SystemVerilog, ModelSim

Skills

Hardware & Validation: Prototype testing, electrical validation, CAN systems, HiL testing, timing analysis, design of experiments

Programming: C, C++, MATLAB, Python, AVR Assembly, SystemVerilog

Tools: KiCad, Cadence, Excel, Powerpoint, Word, Vector CANoe, DTS Monaco

Languages: English, Japanese (JLPT N1)