Rugby Taylor

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EDUCATION

Brigham Young University, Ira A. Fulton College of Engineering Apr 2027
Bachelor of Science, Electrical Engineering

- GPA: 3.0
- Embedded systems and IoT development (hardware and software)
- Power electronics filtering and signal processing

SKILLS

- Software Knowledge: C/C++, Python, MATLAB, ESP-IDF, IoT platforms, GitHub Actions, SystemVerilog
- Hardware and Design Tools: ESP32, Raspberry Pi, KiCad, LTspice, Fusion 360, SolidWorks, FPGA design
- Fabrication and Prototyping: Soldering, custom hardware assembly, welding, woodworking, milling

RELEVANT EXPERIENCE

RESCUE POWER Feb 2025 - Present
Part-time Field Engineer

- Enhanced reliability of offshore 20KVA battery backup systems in worldwide oil rigs, reducing downtime and ensuring continuous power availability for critical safety operations
- Installation and refurbishment of large-scale (60KVA – 120KVA) battery backup UPS systems on military installations globally, mechanical and electrical refurbishment, and replacing/upgrading 58+ battery packs per system to extend operational lifespan
- Maintenance of power filtering and battery backup for light rail in CA Bay area (BART)

PROJECTS

Embedded Digital Oscilloscope Oct 2025 - Dec 2025

- Implemented a real-time ESP32 digital oscilloscope with custom analog front-end circuitry, LUT-based voltage calibration verified to under 2% error, supported by CI GitHub Actions for automated firmware compilation and release artifacts

Algorithmic Signal Execution API July 2025 - Present

- Built an automated API that evaluates time-series signals at regular intervals and executes actions only after sustained confirmation conditions. Validated decision logic using months of historical replay data across hundreds of signal evaluations

Smart Blinds Automation System Mar 2025 - Aug 2025

- Developed a fully autonomous blinds system, programming custom C firmware on ESP32 and Raspberry Pi; debugged, 3D-modeled, and fabricated a 3D-printed system housing

Battery System Development Aug 2023 - Dec 2023

- Devised custom battery system for electric skateboards integrating circuitry and battery cells to enhance performance, reliability, safety, and reduced costs by roughly 12%

LEADERSHIP EXPERIENCE

- Led volunteers in community outreach and service initiatives during a two-year program. Proposed and implemented a new system, boosting productivity across the program by 50%
- Founded a furniture business crafting custom metal, wood and epoxy resin tables, managed design, fabrication, sales, and business operations
- Provided individualized and group swim instruction for 8 years, enhancing leadership and teaching abilities