Aymes Glidewell (407) 373-4500

Github | Software Application Engineer I | Website

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EDUCATION

University of Central Florida (UCF) - Orlando, FL **B.S in Electrical Engineering**, 08/2021 – 05/2024

TECHNICAL SKILLS

Programming Languages: C/C++, Python, JavaScript, Matlab, Plain English
Hardware: ARM Cortex-M Microcontrollers, MCU Implementation, PCB Design, Sensors & Actuators, Communication Protocols (UART, SPI, I2C, BACnet, Modbus), JTAG/SWD Debugging, Oscilloscope
Software & Tools: Altium Designer, KiCad, Fusion360, Git, EcoStruxure, Microsoft Office
Networking & Systems: TCP/IP, DHCP, IP Addressing, BACnet/MSTP, Embedded System Debugging, Real-Time Operating Systems (RTOS), Lab Test Equipment (Multimeter, Function Generator, Oscilloscope, Logic Analyzer)

PROFESSIONAL EXPERIENCE

Software Applications Engineer | Schneider Electric | Lyndhurst, NJ / NYC | September 2024 – Present

- Develop, program, and debug control sequences for building automation systems using scripting languages on microcontroller-based controllers across three high-profile commercial sites in the New York City area.
- Configure and set up BMS controllers and ensure they communicate effectively with field hardware for accurate system control
- Manage IP addressing, BACnet/MSTP network configuration, and device communications to ensure system reliability.
- Troubleshoot hardware, firmware, and network issues using embedded system debugging techniques and diagnostic tools.
- Deploy software and firmware updates and sequence enhancements in collaboration with engineering and field teams, improving efficiency and reducing downtime.
- Work with third-party contractors during commissioning to verify system functionality and durability, quickly identifying and resolving programming issues as they arise.

Hardware Design Research Assistant | Smart Infrastructure Data Analytics Lab | Orlando, FL | Aug 2023 – Jul 2024

- Designed and optimized embedded systems for smart home devices, improving energy efficiency by 20% and enhancing reliability.
- Created schematics and PCB layouts in Altium Designer and Fusion360 for power electronics circuits, ensuring compliance with safety and manufacturing standards.
- Validated hardware performance using oscilloscopes, function generators, and lab instrumentation to verify design specifications.
- Applied power systems engineering principles (power flow, short circuit analysis, voltage regulation) to enhance grid-connected device performance.
- Integrated firmware and hardware, optimizing control logic for stable operation and efficient energy use.

PROJECT EXPERIENCE

Handheld Chord Synthesizer:

- Designed and implemented a portable chord synthesizer using an STM32 microcontroller programmed in C++, enabling polyphonic sound generation and real-time user control.
- Developed custom schematics in KiCad and Altium Designer, sourced electronic components, and ensured manufacturability and cost-efficiency of the design.
- Integrated hardware and firmware, optimizing signal processing and control logic for low-latency audio output and reliable battery-powered operation.
- Built and tested functional prototypes, validating electrical performance with oscilloscopes and lab equipment to ensure audio fidelity and system stability.