

Aymes Glidewell

Systems Applications Engineer

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SUMMARY

Electrical Engineer and controls specialist experienced in programming and commissioning building management systems (BMS) across active commercial sites. Skilled in DDC sequence development, BACnet/MSTP and Modbus networking, operator graphics, and field commissioning, with a hardware foundation in embedded systems and the ability to trace faults from software dashboards to physical wiring.

EDUCATION

University of Central Florida (UCF) - Orlando, FL

B.S. in Electrical Engineering, 08/2019 – 05/2024

TECHNICAL SKILLS

Programming Languages: C/C++, Python, JavaScript, MATLAB

Hardware: PCB Design, Sensors & Actuators, ARM Cortex-M Microcontrollers, Communication Protocols (BACnet, Modbus, UART, SPI, I2C)

Mechanical & Cooling: Chillers, CRAC/CRAH Units, Air Handling Units (AHUs), VAV Boxes, RTUs, VFDs, Pumps, Valves, Dampers & Actuators

Electrical & Metering: UPS & Power Monitoring (EPMS), BTU/Flow/Power Meters

Software & Tools: EcoStruxure, Automated Logic Control, Continuum, Microsoft Office

Networking & Systems: TCP/IP, DHCP, IP Addressing, BACnet/MSTP, Modbus, Real-Time Operating Systems (RTOS), Lab Test Equipment (Multimeter, Function Generator, Oscilloscope)

PROFESSIONAL EXPERIENCE

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

- Develop, program, and debug DDC control sequences for building management systems (BMS) using scripting languages on programmable field controllers across 5 active high-profile commercial sites in the New York City area.
- Configure and troubleshoot operator interface graphics for BMS controllers, ensuring reliable communication with field hardware for accurate, real-time system control.
- Manage networking protocols—IP addressing, Modbus integration, and BACnet/MSTP network configuration—to ensure device communication and system reliability.
- Troubleshoot hardware, firmware, and network issues with diagnostic tools, tracing faults from operator dashboards back to physical wiring, sensors, and panel terminations.
- Deploy software/firmware updates and sequence enhancements alongside engineering and field teams, improving efficiency and reducing downtime.
- Reduced site energy use by 10% on average through control sequence optimization and operational improvements, improving the efficiency of an existing building system.

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 Fusion 360 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.

PROJECT EXPERIENCE

Demand-Side Response Water Heater Controller

- Built a real-time controls system on an MSP430 microcontroller that monitors grid frequency and modulates a 30A load via a solid-state relay in ~11 ms, applying sensor-to-actuator control logic directly analogous to BMS field control.
- Designed the analog front-end and multi-board PCB architecture for point-to-point measurement of frequency, voltage, current, and temperature, achieving 1% frequency accuracy and isolating high-voltage circuitry from sensitive measurement signals.