Wole Senat

(561) 388-4772 | senatwole@gmail.com | www.linkedin.com/in/wole-senat

EDUCATION

Florida State University, Tallahassee, FL
Bachelor of Science, Electrical Engineering Anticipated May 2027
Relevant Coursework: Circuit Analysis, Digital Logic Design, Microprocessors and Electronics, Signals and Linear Systems, Electromagnetics

SKILLS

Languages: HTML, CSS, C++, Verilog, Embedded C, VHDL, C#, Python, Ladder Logic
Software: Code Composer Studio, Multisim, MATLAB, Questa, Quartus, NI ELVIS, Unity, Cameo Sys-ML, Studio 5000, FactoryTalk Optix
Technical: PLC/HMI Integration, Embedded Systems, Circuit Design, FPGA Development, PCB Fabrication, Soldering, Microcontrollers (MSP430/MSP432, Arduino), TI-RSLK, DE1-SoC, Analog Discovery 2, Multimeter, AR/VR Development, System Modeling, Digital Twin

EXPERIENCE

Shaw Industries, Bainbridge, GA
Electrical/Controls Engineering Intern October 2026 – Present
- Support industrial automation and manufacturing control systems through PLC programming, Ladder Logic development, and HMI/SCADA integration using Ignition.
- Investigate and optimize bulk material level measurements in industrial storage silos, aiming to reduce approximately 4% measurement error caused by uneven, conical material distribution.

Center for Advanced Power Systems, Tallahassee, FL
Undergraduate Research Assistant – AR/VR Systems Modeling January 2026 – Present
- Designed and implemented immersive AR/VR digital twin environments in Unity to visualize SysML-based systems for multidisciplinary teams, reducing model configuration time by 70%.
- Developed a SysML-to-Unity workflow capable of translating 500+ model elements and engineering attributes into interactive prototypes for system visualization, verification, and stakeholder communication.

Young Engineers Tallahassee, Tallahassee, FL
STEM Instructor May 2026 – July 2026
- Developed and delivered hands-on STEM lessons covering robotics, programming, electronics, artificial intelligence, engineering design, and 3D printing for 60+ students in grades 4 – 8.
- Guided students in designing and programming 15 hands-on engineering projects using microcontrollers, sensors, and rapid-prototyping tools, strengthening technical problem-solving and teamwork.

Battery Source & Batteries Plus Bulbs, Tallahassee, FL
Battery Systems & Electronics Technician June 2024 – October 2025
- Interpreted electrical schematics and applied circuit analysis and electrical testing to wiring diagrams to troubleshoot battery packs, charging systems, and golf cart assemblies, reducing repeat service issues by 30%.
- Earned Apple ATLAS and WISE certifications while performing hardware-level diagnostics and repairs on 100+ electronic devices, achieving a repair success rate exceeding 95%.

TECHNICAL PROJECTS

Rockwell Automation Custom Kit Factory - Senior Design **|** CompactLogix PLC, FactoryTalk Optix, HMI, Studio 5000
- Developing a portable automated fulfillment system that converts FactoryTalk Optix HMI user selections into Lego style kits.
- Integrating PLC control logic, HMI controls, sensors, and actuators for inventory management, production, sequencing, quantity verification, packaging, and labeling.

Johnson & Johnson Robotics & Controls Job Simulation | Forage, Python, Control Systems
- Diagnosed delayed robotic surgical-arm response by analyzing Python control code and conducting 10+ iterative tests to isolate software inefficiencies affecting control-system performance.
- Validated modifications to reduce simulated control-response delay by 40%, improving system precision and reliability.

Autonomous Line Following Robot **|** TI-RSLK MAX, MSP432, Embedded C
- Developed a feedback control algorithm using 8 infrared sensors and differential motor control to adjust wheel speeds.
- Implemented a multi-mode state machine for system control and diagnostics, then optimized performance through 55+ hardware tests, improving tracking accuracy by 35% through sensor calibration and control parameter tuning.

INVOLVEMENT

National Society of Black Engineers, *T.O.R.C.H. Committee* August 2025 – Present
Institute of Electrical and Electronics Engineers, *Member* August 2024 – Present
Mu Epsilon Chapter of Phi Beta Sigma Fraternity, Inc., *President* May 2024 – May 2025