Jeda Williams

jeda.h.williams@vanderbilt.edu

EDUCATION

Vanderbilt University **Nashville, TN | Expected Graduation May 2027**

B.S. Electrical and Computer Engineering | Minors: Computer Science, Engineering Management GPA: 3.03/4.00

Coursework: Circuits I, Analog Circuits and Systems, Microcontrollers (lab), Digital Systems (lab), Electronics I (lab), Program Design and Data Structures, FPGA Design, Microelectronic Systems, Materials Science (lab)

Activities: Theta Tau, National Society of Black Engineers, Vanderbilt Volunteers for Science (Advancing Science Education for Nashville's Future Leaders), 'Dore for a Day Representative, SCALE, IEEE

TECHNICAL EXPERIENCE AND PROJECTS

Tiny Tapeout IC Design **Nashville, TN**

Team Member *January 2025 - December 2025*

- Designed and validated a ring-oscillator-based IC test structure with CAD; performed 15+ corner, parasitic, and Monte-Carlo simulations in LTspice to characterize frequency drift and timing behavior under variation
- Implemented digital logic modules in Verilog and prepared the full Tiny Tapeout submission package, including I/O mapping, tile metadata, and pinout integration
- Collaborated with team members to draft test plans and establish clock/reset strategy for post-fabrication testing

Robot Maze Solver **Nashville, TN**

ECE 2218L Final Project *August 2025 - December 2025*

- Programmed an autonomous maze-solving robot in C using IR sensor feedback, PWM motor control, and a priority left turn algorithm for real-time navigation
- Bench-tested sensor feedback and motor signal timing using UART logging and oscilloscope capture, improving navigation reliability by 40% through iterative tuning
- Debugged power delivery and subsystem wiring during repeated lab test cycles, contributing to design stability and test repeatability

PROFESSIONAL EXPERIENCE

iD Tech **Atlanta, GA**

Battlebots Instructor *June 2025 - July 2025*

- Led 20+ technical workshops teaching students the entire engineering design process, from brainstorming and drafting to prototyping and testing, using Battlebots as a dynamic learning platform
- Incorporated foundational STEM concepts such as gear ratios, torque, structural stability, and base-to-height ratios to develop early engineering intuition and critical thinking skills

PMR Solutions **Metairie, LA**

Security Analyst/Engineering Intern *April 2023 - May 2023*

- Installed and configured campus-wide electronic access control hardware, including card readers, maglocks, and networked security endpoints
- Assessed system load, wiring routes, and hardware integration requirements to ensure system reliability for 400+ users across multiple buildings on the campus

LEADERSHIP EXPERIENCE

Theta Tau Engineering Fraternity **Iota Delta Chapter, TN**

Lead Professional Development Chair *January 2024 - May 2025*

- Increased professional development engagement by organizing and leading approximately 3 workshops per semester
- Expanded networking opportunities by collaborating with additional organizations to host 4 joint events, attracting an audience of 100+ attendees and engaging recruiters from a total of 7 companies

SKILLS AND COMPETENCIES

Electrical & Embedded Engineering: Circuit analysis, Embedded systems, Microcontroller programming, C, SPI, I2C, ADC, timers, interrupts, real-time systems, sensor integration, Internet of Things (IoT), soldering, breadboarding, PLCs, PCBs

Digital & Semiconductor Design: Verilog, VHDL, FPGA design, RTL design, LTSpice/SPICE simulation, parasitic analysis

Testing, Debugging & Tools: bench testing, troubleshooting, logic analyzer, DMM, function generator, power supplies, iterative debugging, FMEA, hardware bring-up, Quartus Prime, Microchip Studio, Arduino, CAD, Python, Java, Mathematica, EDA