TOM TIGER

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EDUCATION

University of Memphis, Memphis, TN   Expected Graduation: May 2026
Bachelor of Science, Electrical and Computer Engineering

- GPA: 3.7/4.0
- Relevant Coursework: Embedded Systems, Digital Design, Analog Circuits, Computer Architecture, VLSI Design, Control Systems, Signals & Systems, Data Structures, Operating Systems, Microprocessors

TECHNICAL SKILLS

- Programming: C, C++, Python, Verilog/VHDL, Assembly, MATLAB, Bash
- Hardware/Tools: Arduino, STM32, Raspberry Pi, Oscilloscopes, Multimeters, FPGA (Xilinx/Altera), Logic Analyzers
- Software: Quartus, Vivado, LTSpice, KiCad, Multisim, AutoCAD Electrical, Git, VS Code
- Systems: Embedded Linux, RTOS (FreeRTOS), I2C/SPI/UART protocols, PCB Design
- Certifications: CSWA – SolidWorks, MATLAB Onramp, OSHA 10-Hour

RELEVANT EXPERIENCE

Memphis Light, Gas and Water (MLGW), Memphis, TN   May – August 2024
Embedded Systems Intern

- Developed C firmware for sensor data acquisition on STM32 microcontroller, reducing system latency by 20%
- Integrated I2C and UART communication protocols for real-time environmental monitoring
- Assisted in schematic review and hardware bring-up for custom PCBs

University of Memphis, Memphis, TN   August 2023 – Present
Undergraduate Research Assistant – FPGA & Digital Systems

- Designed and synthesized digital circuits using VHDL for pattern recognition applications on Xilinx FPGA
- Created testbenches and verified module performance using ModelSim
- Contributed to publication draft on optimizing pipelined architectures

PROJECTS EXPERIENCE

Autonomous Obstacle-Avoiding Robot   Fall 2024

- Programmed Arduino-based robot with ultrasonic sensors and motor drivers
- Developed pathfinding logic to avoid collisions using real-time sensor feedback
- Presented at campus tech showcase; robot completed course with 95% accuracy

FPGA-Based Reaction Timer Game   Fall 2023

- Designed digital game in Verilog using seven-segment displays and push buttons
- Implemented state machine logic and debounce circuits for reliable input
- Deployed and tested on Basys 3 development board

VOLUNTEER WORK EXPERIENCE

White Station High School, Memphis, TN   Summer 2024
STEM Outreach Volunteer – Robotics & 3D Printing

- Led workshops for local high school students, boosting technical engagement among 50+ participants
- Taught fundamentals of CAD and Arduino programming

ACTIVITIES & INVOLVEMENTS

IEEE Student Chapter – Hardware Team Member   August 2023 – Present

- Collaborated with peers on a wearable health monitoring system project
- Assisted in sensor integration, PCB layout, and microcontroller interfacing