Peter Younan

586-701-1266 | peteryounan2004@gmail.com | linkedin.com/in/peter-younan-/

Professional Focus: Applied Systems and Design

Electrical and Computer Engineering student with hands-on experience in FPGA design, embedded systems, and electromechanical projects, including VHDL-based digital logic, sensor-driven control systems, and hardware-software integration. Seeking an internship in electrical, embedded, or automotive systems engineering.

EDUCATION

Bachelor of Science, Electrical and Computer Engineering; 3.4 GPA   **Expected: Fall 2026**
Oakland University, Rochester, MI

TECHNICAL SKILLS

Programming Languages: Arduino, C#, C++, Python, MATLAB, VHDL
Software Applications: Catia V5, Visual Studio, Vivado, Spice, Tecnomatix Plant Simulation, Code Warrior

PROJECTS

Signed Calculator
- Designed and implemented portions of an 8-bit signed calculator on a Nexys A7-100T FPGA, collaborating within a team-based hardware design environment.
- Developed VHDL modules in Vivado implementing finite state machines (FSMs), registers, multiplexers, and an arithmetic logic unit (ALU) to support addition, subtraction, multiplication, and division.
- Integrated signed and unsigned number handling, enabling LED-based output visualization and user input through on-board push buttons.
- Validated functionality through waveform simulation and on-board hardware testing, ensuring correct arithmetic operations and control logic.

Automated Blinds
- Designed an automated blind system by calculating required motor torque and selecting appropriate motors to meet mechanical load requirements.
- Created a full CAD assembly for motors and 3D-printed components, validating fit, alignment, and mechanical integration prior to fabrication.
- Implemented sensor-based control using a light sensor to automatically open or close blinds based on lux level readings.
- Developed a manual override mode using a remote control, enabling user-controlled operation independent of sensor input.

Tic-Tac-Toe Game (Embedded Systems)
- Collaborated with a team of four engineers to develop an interactive Tic-Tac-Toe game on a Dragon12-Lite microcontroller board using C.
- Implemented a physical LED game board using a 9×9 LED grid on a breadboard, driven through microcontroller data pins for real-time move visualization.
- Developed joystick-based navigation controls enabling up/down/left/right and diagonal movement for intuitive gameplay.
- Utilized the board's LCD interface to display player turns, track game scores, and indicate game outcomes.

WORK EXPERIENCE

Backroom Crew   6/2024–Present
Walmart, Warren, MI
- Trained new employees on order fulfillment processes and inventory stocking workflows to improve team efficiency.
- Collaborated with cross-functional team members to meet daily operational targets under time constraints.
- Prioritized tasks in a fast-paced environment while supporting customer fulfillment and inventory accuracy.