LEON WANG

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EDUCATION

NORTHWESTERN UNIVERSITY (GPA 3.96/4.00) — Evanston, IL
Bachelor/Master of Science in Computer Engineering — June 2026

- Relevant Coursework: Computer Architecture; ASIC & FPGA Design; Advanced Digital Logic; Microprocessor System Design; Data Structures and Algorithms; Computer System Software

UNIVERSITY OF ROCHESTER — Rochester, NY
August 2022 – May 2023 *(Transferred Fall 2023)* — June 2022

WORK EXPERIENCE

VISCOFAN — Bridgewater, NJ
Engineering Intern — June 2024 – August 2024

- Designed a PLC/Display system using a Click PLC and C-more HMI for the pressure test bench
- Programmed a Click PLC with ladder logic to control a solenoid valve based on user-defined setpoints and pressure readings to create a pressure test bench for food casing
- Built a control system for the chiller pump, which included programming a DURApulse Variable Frequency Drive with a PID loop for precise pressure control of the pump

NORTHWESTERN IMEC LAB — Evanston, IL
Undergraduate Research Assistant — December 2023 – June 2024

- Engineered the hardware system of the low-cost motion capture system for drones by modifying PS3 Eye cameras to act as IR cameras and attaching IR markers to drones
- Developed a Python library on Linux for millimeter-precision, real-time tracking, leveraging OpenCV to identify IR markers in video feeds and applying epipolar geometry to accurately compute the 3D positions of both cameras and markers

LAVNER EDUCATION — New York, NY
Information Technology Intern — June 2023 – August 2023

- Instructed high school students in programming languages, including Python, Java, and C/C++
- Responsible for troubleshooting and providing technical support to over 50 students and staff
- Set up and configured computers and software for each class, communicating technical requirements and solutions to non-technical staff

RELAVANT PROJECTS

Path-Following Robot — June 2024

- Designed and built a custom path-following robot with custom PCBs, circuits, and 3D-printed parts, integrating a PIC32 microcontroller and Raspberry Pi Zero, and Raspberry Pi Camera
- Developed Python code for the Pi Zero to capture images with a Raspberry Pi camera, applying derivative edge detection and sending real-time line position data via UART to the PIC32.
- Programmed the PIC32 in C to use PWM and differential drive algorithms to control wheel motors based on line position data from the Pi Zero, achieving precise path following.

PID Motor Control Project — March 2024

- Programmed PIC32 microcontroller in C to implement a PID control loop for a DC motor, allowing the motor to precisely follow any user input trajectory
- Built a Python-based client to interface with the PIC32 microcontroller, allowing for user-friendly interaction, tuning, and data visualization
- Used PIC32 peripherals, such as I2C and UART, to communicate with the motor and PC

LEADERSHIP

FOUNDATION FOR TECHNOLOGICAL EDUCATION AND RESEARCH — East Brunswick, NJ
Co-Founder and Robotics Curriculum Lead — April 2020 – Present

- Built an online STEM education network to teach students (ages 12 – 18) about programming languages, robotics, and communications through online interactive lectures and private lessons
- Interviewed, recruited, and trained 20+ new teachers to grow and expand the organization
- Designed personalized lesson plans to match students' skill levels and online environment

SKILLS

Languages: Java, Python, C++, C, Verilog, VDHL, MATLAB, R, Racket
Applications: Linux, Cadence, Genus, Visual Studio, GitHub, SolidWorks, R-Studio
Hardware: Circuit Design and Analysis, Hardware Testing, Microcontrollers, PCB Design, CAD