

Zachary Kull

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Education

University of Illinois at Urbana-Champaign

Bachelor of Science in Electrical Engineering, Minor in Computer Science

Expected May 2027

GPA 3.81 / 4.0

- **Relevant Coursework:** Analog Signal Processing, Computer Systems and Programming, Intro to Electronics, Intro to Computing

Experience

TenderTrak

Hardware Engineering Intern

May 2025 – Aug. 2025

Palatine, IL

- Developed a low-power radio tracking device for the marine industry incorporating Bluetooth, GPS, LoRa, and solar charging
- Designed the schematic, PCB layout, and bill of materials for the tracking device using **KiCad**, ensuring an efficient, cost-effective, and small form factor for the design
- Optimized a reference design's power consumption in **C++**, enabling the device to operate entirely on solar power

Mariano's

Bakery Clerk

Mar. 2024 – Aug. 2024

Palatine, IL

- Practiced proper customer service by assisting with product selection, addressing inquiries, and maintaining a welcoming environment
- Prepared and packaged bakery goods in compliance with food safety standards while collaborating with team members to complete tasks and train new employees

Projects

Robotic Car with Audio Triggered Controls

Dec. 2024

- Designed and built a robotic car capable of autonomous movement by integrating sub-circuits for audio detection and motor control
- Debugged the circuit using an **oscilloscope** to analyze and adjust pulse width modulation signals, ensuring precise speed control

Technical Skills

Programming Languages: C, C++, Python, JavaScript, Matlab, HTML

Software & Tools: KiCad, Git, GitHub, Bash, Zephyr, Visual Studio Code

Extracurriculars

Ghost Electric Motorcycles

Jan. 2025 – Present

- Collaborated with the electrical team to design a high-capacity battery system for an electric motorcycle
- Performed electrical and energy calculations to optimize battery performance, safety, and efficiency while also designing the cell layout and form factor to fit within chassis constraints and maintaining structural integrity and thermal management

Beta Theta Pi Philanthropy Chair

May. 2025 – Present

- Developed and managed a comprehensive philanthropic calendar, ensuring the timely execution of all fundraising campaigns and volunteer efforts, with proceeds benefiting the local charity Project Fire Buddies
- Spearheaded the creation of a formal volunteer program for the chapter, organizing the first-ever regular service outings to local non-profits

Online Shoe and Clothing Resale

Jul. 2022 – Aug. 2023

- Operated a successful reselling business specializing in high-demand sneakers and streetwear, sourcing products from retail, marketplaces, and private sellers
- Conducted market research to track trends and optimize revenue and product turnover