

Jacob Kelly

Electrical and Computer Engineer

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EDUCATION

Eastern Michigan University

Bachelor of Science Electrical and Computer Engineering, 3.13 GPA

Relevant Coursework: Circuit Analysis II; Control Systems, Power Electronics

Ypsilanti, Michigan

8/2020 – 12/2024

Huron High School

International Baccalaureate (IB) Learner

Relevant Coursework: Programming; Robotics; PLTW

Ann Arbor, Michigan

09/2016 – 06/2020

WORK EXPERIENCE

Target Corporation

Guest Advocate

Ann Arbor, Michigan

08/2020 – Present

- Additional roles learned: Drive-Up, Cart Attendant, Service Advocate, Tech Sales.
- Drive-Up: Managed 15+ concurrent orders delivered consistently under two minutes with a team of three.
- Cart Attendant: Constant workflow, ensuring free carts for guests and maintaining store cleanliness.

Learned skills: Time Management, High Intensity Workload, Team Coordination, Accountability

ACTIVITIES AND LEADERSHIP

EMU Senior Capstone Team Leader

01/2024 – 4/2024

- Ensuring deadlines are met, supporting team members, and submitting progress reports
- Designed a 'Smart Garden Sentry' using ML and object detection to only target rodents

EMU IEEE Club Member

01/2023 – Present

- Worked on projects relating to EECE, discussing tech news, and internship preparedness

PROJECTS

Theseus Contributor

January 2024

- Theseus is an open source modded game launcher, with thousands of end users.
- Programmed in Vue.js and Rust, I created a missing core feature that all end users will benefit from. Work included concurrent asynchronous http requests, image and data manipulation, and UI design

Battery Replacer PCB

July 2023

- Created a PCB using Kicad and manufactured with JLCPCB. Hand soldered
- Designed to replace 1.5V AA or AAA batteries. Takes a 5V input to charge Lithium-ion battery, 1.5V LDO output. Used with a 5V Qi wireless receiver module to allow wireless charging and infinite runtime

Home Media Server

December 2022

- Deployed and Unraid Server with multiple drives, using the command-line and Nano Editor
- Created a reverse proxy using nginx and integrating it with docker containers on the server. The reverse proxy worked with a custom domain name to create https connections with valid certifications using Let's Encrypt
- Features include: Cloud File Server, Network-wide Ad Blocker, Homeassistant, Remote PC Access

Smart Home Integration

July 2022

- Designed and created a system to convert a garage door into a smart garage, allowing control from anywhere in the world and automation
- Garage door built off of ESP8266 Node MCU dev board and 3D printed enclosure
- Implemented a network server to host custom smart devices and allow integration with smart apps

ADDITIONAL INFORMATION

- **Technical Skills:** NCEES FE Certified, MS Office Suite, Rust, Embedded C, Java, Javascript, CAD, 3D Printing, IoT, linux, Docker, Unraid, PCB Design, Soldering SMD and THT, Building Computers
- **Languages:** Fluent in English; Conversational Proficiency in Spanish