

Owen Park

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Education

University of Michigan

B.S.E. in Computer Engineering

- GPA: 3.92 / 4.0
- Coursework: Data Structures and Algorithms, Computer Architecture, Embedded Systems, Signals and Systems

Ann Arbor, MI

April 2025

CEA CAPA

International Program in Engineering

- Coursework: Linear Algebra, Art History of Prague: Past and Present

Prague, Czechia

Summer 2023

Skills

- **Languages:** C, C++, {Java/Type}Script, Java, HTML, CSS, Python, SQL, Verilog, Bash, HCL, Lua, Rego
- **Web Technologies:** React, Next.js, Express, Node.js, MongoDB
- **Technical/Tools:** Git, AWS (SDK, S3, and EC2), Docker, Terraform

Experience

Michigan Mars Rover

Embedded Software Member

- Integrated FreeRTOS on STM32 microcontrollers in C to manage concurrent tasks with various sensors, ensuring efficient communication and coordination between the subsystems
- Designed and implemented a C++ ROS nodelet, interfacing the NVIDIA MTT CAN driver on our Jetson and integrating netlink sockets for CAN interface activation
- Leveraged multithreading to concurrently read from ROS topics and communicate with the CAN bus, enhancing real-time data exchange efficiency
- Accomplished successful CAN communication between various STM32G4 microcontrollers, allowing for full functionality on our rover, replacing our existing I2C system

Ann Arbor, MI

Sept. 2022 - Present

University of Michigan CSE Department

Undergraduate Researcher

- Researching how large language models can be used to generate infrastructure as code configuration files for Terraform from natural language descriptions to present at the International Conference on Machine Learning
- Building a comprehensive dataset of over 1,000 different prompts, policies, and target configurations of Terraform AWS resources
- Writing efficient Python scripts and thorough OPA policies in Rego in order to automate the validation of our dataset of Terraform configurations

Ann Arbor, MI

Aug. 2023 - Present

Projects

Podium Prints Ecommerce Website - Full-Stack - podium-prints.com

Dec. 2023

- Developed a full-stack ecommerce web app in TypeScript with a Next.js frontend and an Express backend, integrating Payload CMS to easily access a MongoDB database and AWS S3 bucket
- Managed API endpoints using tRPC, ensuring a type-safe backend that seamlessly integrated with the frontend
- Leveraged the Stripe API and webhooks to handle secure and efficient payment processing
- Used Docker Compose, Terraform, and LocalStack to create an instant development environment with a mock S3 server and local MongoDB database

Michigan Women Investment Group Website - Front End - michiganwig.com

Sept. 2023

- Designed and deployed a responsive single-page site for the MWIG organization using vanilla JavaScript, HTML, and CSS, ensuring a seamless user experience across all devices

Honors and Activities

- **Honors:** University Dean's Honors List, Perfect ACT Scorer, AP Scholar with Distinction x3
- **Affiliations:** Korean-American Scientists and Engineers Association, Asian American Association
- **Hobbies:** 7v7 Intramural Flag Football, 3v3 Intramural Basketball, Traveling, Hiking