

Robert Kang

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EDUCATION

University of Michigan - Ann Arbor

May 2026

- Major: B.S.E. in Computer Science Engineering, Minor: Mathematics
- GPA: 3.7
- Relevant Coursework: Data Structures and Algorithms (C++), Foundations of CS, Operating Systems

WORK EXPERIENCE

Amazon (AWS) | SDE Intern | Seattle, WA

May 2024 - Aug 2024

- Optimized encryption key rotation service for AWS EC2 servers to accelerate distribution time by 28%
- Leveraged AWS internal software tools to make encryption rotation service more modular and serverless
- Refactored encryption service to implement at the start of region builds, enhancing AWS security posture

Honda Research Institute | Robotics SWE Intern | Ann Arbor, MI

Jan 2024 - May 2024

- Implemented LED display to communicate autonomous robot's intent to humans, reducing collisions by 34%
- Integrated ZED2 Camera into existing navigation stack, allowing for human and object detection
- Developed voice command stack that classifies verbal inputs and converts to robot actions using C++/ROS

Shade Inc. (Startup) | Fullstack SWE Intern | Ann Arbor, MI

Nov 2022 - Sep 2023

- Collaborated with business team to build highly requested features for **Electron App** using **React** and **Python**
- Implemented media captioning tools on company site to increase SEO impact and website traffic by 250%
- Developed box select tool for users to seamlessly select multiple files, improving integration with other apps
- Introduced previews for HDR files in backend indexing stack to enhance file support and search for users

PROJECTS

Online Forum Question Identifier | Project Leader

Feb 2023 - April 2023

- Developed C++ program that identifies the topic of Piazza posts using NLP and ML with 81% accuracy
- Trained and classified data using the Multi-Variate Bernoulli Naive Bayes Classifier
- Integrated custom implementation of Binary Search Tree and Map ADT to increase speed of program by 12%

ParkAssist | Team Leader

Jan 2022 - April 2022

- Oversaw team of 6 engineers to build cross-platform software that tracks available spots in parking garages
- Communicated and managed data between the website and mobile app using **Google Firebase SDK**

LEADERSHIP AND ACTIVITIES

Michigan Investment Group | Quantitative Developer

Jan 2023 - Present

- Created and optimized custom array based order book implementation using C++
- Visualized and implemented common trading algorithms on historical market data using **Python**
- Collaborated with club members in market making games, fostering teamwork and strategic thinking

VEX Robotics Team | Lead Strategist and Mechanic

May 2020 - June 2022

- Coordinated with team to design multiple iterations of robot to maximize efficiency of each subsystem
- Arts Division Finalists (**Ranked Top 20 in the World**) - VEX Robotics World Championship

HTHS Technology Student Association Chapter | President

August 2020 - June 2022

- Organized meetings and design challenges to teach members problem-solving and engineering principles
- Advised junior members to improve their projects for their respective TSA competitions
- **1st Place** - NJ Technology Student Association Software Development Competition

SKILLS

Coding: Proficient: Javascript, C++, Python, HTML/CSS, Java | **Familiar:** MATLAB, Typescript

Software Tools: React JS, Node.js, Figma, Electron, Next.js, Firebase, Tailwind CSS

Languages: English (fluent) and Korean (conversational)