Catherine Kim

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EDUCATION

University of Michigan   **Ann Arbor, MI**
BS Computer Science, Cognitive Science   *Aug 2020 – May 2024*
- Relevant coursework: Data Structures & Algorithms, Operating Systems, Intro to AI, Discrete Math, Theory of Computation, Intro to Computer Organization, Web Systems, User Interface Development, Digital Product Design

Yonsei University   **Seoul, South Korea**
Exchange Semester   *Aug 2023 – Dec 2023*

WORK EXPERIENCE

Amazon Web Services   **Seattle, WA**
Software Engineering Intern   *May 2023 – Aug 2023*
- Implemented a framework for a task scheduler for users to use within the AWS Aurora team that schedules garbage collection for customer data backups in **Java.**
- Constructed **SQL** queries that query **AWS DynamoDB** schemas and check if a garbage collection task existed.
- Improved garbage collection efficiency by 5% and reduced the backup team's AWS S3 footprint usage by 5%.

University of Michigan   **Ann Arbor, MI**
Teaching Assistant for Web Systems (EECS 485)   *Jan 2023 – Apr 2023*
- Lead office hours and lab instruction for a course of 500 students to teach web-based systems topics such as full-stack development (**python, SQL, HTML, Flask, and React.js**) and distributed systems such as MapReduce.
- Created exam questions, presentation slides, and programming demos for lab instruction.

Teaching Assistant for Elementary Programming Concepts (EECS 183)   *Aug 2022 – Dec 2022*
- Lead office hours and lab instruction for a class size of 1200 students to teach introduction to programming in **C++**.
- Updated staff page on course website using **Ruby, Jekyll,** and **YAML**.

Qualcomm   **San Diego, CA**
Embedded Software Engineering Intern   *May 2022 – Aug 2022*
- Simplified the testing process on the Camera team by implementing a VS Code extension module, in **TypeScript, JavaScript, HTML, and CSS**, that interacts with the HAL layer to invoke faster and more unified testing across teams.
- Built a JSON use case builder that takes user inputs to generate a nested JSON file used for camera testing**.**

University of Michigan   **Ann Arbor, MI**
Research Assistant   *May 2021 – Aug 2021*
- Analyzed detection of lung nodules in computed tomography using machine learning.
- Programmed a **Python** script to deploy a DCNN model on training sets of over 10000 MRI scans.

PROJECTS

University of Michigan Mars Rover Project Team   **Fall 2020 – Winter 2023**
- Constructed GUIs, utilizing **HTML, CSS, JavaScript,** and **Vue.js**, that interact with the Rover in real-time by sending and receiving messages through communication channels.
- Embedded **C++** backend Rover arm controls into the GUIs such as being able to move the arm using the GUI.
- Utilized **Vue.js** to design an interface that does an automated sequence of dipping pH strips in water.

Instagram Clone   **Fall 2022**
- Implemented a full-stack Instagram clone with **HTML, CSS, Flask, Python, SQL,** and **React.js**
- Devised REST APIs that are called when users interact with the app such as creating posts or deleting comments.
- Generated a login page that hashes the user's password and saves user information using cookies.

TECHNICAL SKILLS

- Languages: C++, C, Python, JavaScript, TypeScript, SQL, HTML, CSS, Java
- Frameworks: React.js, Vue.js, Flask
- Technologies: Linux, Git, VS Code, LaTeX, AWS DynamoDB, AWS EC2