

KAYLA ROSE HOM

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EDUCATION

University of California, San Diego

M.S. Computer Science and Engineering, Human-Centered Design Specialization
Graduate Women in Computer Science (GradWIC), ACM, Amazon Women of the World

June 2026

GPA: 4

University of California, Davis

B.S. Computer Science and Engineering, Technology Management Minor
Women in Computer Science Co-President, Davis Undergraduate Engineering Network Officer

June 2024

GPA: 3.77

Coursework: Machine Learning, ML Data Systems, AI, Computer Vision, Software Engineering, HCI, Data Structures, OOP, OS Systems, Web Development, Algorithm Design, Computer Architecture, Computer Networks, Embedded Systems, Databases, Statistics, Linear Algebra

SKILLS & INTERESTS

- **Language:** Python, C, C++, Java, JavaScript, HTML/CSS, SQL
- **Cloud & Databases:** AWS, GCP, MongoDB, MySQL, Docker
- **Framework:** PyTorch, TensorFlow, ReactJS, ReactNative, Node.js
- **DevOps & OS:** Git, GitHub, Docker, Linux, Unix, CI/CD Pipeline

PROFESSIONAL EXPERIENCE

UC Davis Health

Full-Stack Developer

Remote

January 2024 – November 2024

- Modernized 13,000+ lines of legacy code to deploy a self-administered cognitive screening test using ReactJS and Agile methodology via Jira
- Deployed AWS cloud infrastructure with AWS Amplify, AWS AppSync, IAM, and DynamoDB and configured website API integrations

Mr. Cooper Group

Systems Analyst Intern

Remote

June 2024 – August 2024

- Analyzed and organized 800+ customer call transcripts to enhance Agent-Assist Artificial Intelligence (AI) real-time call categorization
- Project managed a team of 6 to research marketing data, increasing annual revenue by \$180,000 and reducing marketing costs by 15%

UC Davis Computer Architecture Research

Undergraduate Researcher

Davis, CA

June 2023 – June 2024

- Collaborated with a team of 10+ researchers to conduct research on Gem5's accuracy through performance testing and development
- Used Docker and Gem5's code base to configure custom architecture and test simulated hardware's reliability with microbenchmarks
- Developed Bash scripts and custom configurations of Berkeley's SOC, Chipyard to create a baseline comparison for Gem5's accuracy

UCSF Pain Neuromodulation Lab

Software Developer Lead

San Francisco, CA

June 2023 – March 2024

- Refactored 5000+ lines of code to create a patient and researcher portal to contain surveys and patient data in ReactJS and ReactNative
- Facilitated the deployment of the patient website through Docker and AWS Amplify and coordinating data storage on MongoDB
- Implemented a user-login interface with AWS Cognito to keep track of users with access tokens to manage API operations in JavaScript

Juni Learning

Computer Science Instructor

Remote

May 2022 – June 2023

- Taught 200+ curated one-on-one computer science lesson plans to students ranging from elementary to high school
- Instructed 15 students on arrays, object-oriented programming, data structures in Python, JavaScript, and Java

UC Davis C-STEM Center

C-STEM Math and Robotics Intern

Davis, CA

June 2022 – March 2023

- Created 50+ math and computer science lesson activities for the program's curriculum, contributing to a 75% increase in SBAC test scores
- Aligned C and C++ based curriculum across 10 different common core standards for grades K-6 on the C-STEM platform website

Apple

iOS Tier 1 Advisor

Elk Grove, CA

July 2019 – March 2020

- Advised 2000+ customers with quick and personalized customer support for a range of Apple devices, including iPhone, iPad, and Mac
- Resolved customer's technical issues efficiently by solving problems with step-by-step guidance, diagnostics tests, and screen sharing

PROJECTS

Cornell SoNIC Computer Vision Research | Python, PyTorch, LLM, Machine Learning (ML)

June 2024 - August 2024

- Conducted ML and deep learning research to enhance food detection accuracy in the LLaVA LLM, focusing on reducing hallucinations
- Manipulated a dataset of 1,500+ images, developing an image manipulation method that improved object detection accuracy by 2%

PNL Survey App & Website | AWS, JavaScript, ReactJS, ReactNative, Node.js, Express.js

June 2023 - March 2024

- Built up backend using Docker and an AWS pipeline including Amazon Cognito, EC2, S3, and RDS for data storage and admin use
- Constructed frontend of app and website design with ReactJS and ReactNative (iOS & Android) including login, menu, and survey page