

# KEVIN XIAO

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## EDUCATION

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### University of Washington

Seattle, WA

BS Computer Science and BA Mathematics *GPA: 3.88*

**Courses:** Data Structures, Algorithms, Parallelism, Hardware/Software Interfaces, Machine Learning, Software Design & Implementation, Computer Security, Cryptography, Software Tools, Discrete Math

## EXPERIENCE

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### Makeability Lab

Seattle, WA

*Research Intern*

June 2024 - Present

- Successfully designed and developed a full-stack accessibility iOS application with SwiftUI that utilizes GPT-4o multimodal capabilities and voice transcription models to support the interaction between blind or low-vision parents and their children regarding artwork
- Application used for user/pilot studies with real mixed-vision-ability families. Paper was submitted to the IUI ACM conference and feedback will be used for public deployment to the app store.

### Husky Satellite Lab

Seattle, WA

*Software Engineer*

April 2024 - Present

- Worked with a CubeSat team of undergraduate engineers to build HuskySat-2, a small and low-power satellite designed for deep space research planned for launch in a few years.
- Researched, implemented, and optimized attitude estimation and star identification algorithms in C++ for LOST, our star tracking subsystem

### International Children's Education Association

Los Angeles, CA

*Software Engineer Intern*

June 2023 - Nov 2023

- Built a web application to help youth chess players around the world learn tactics efficiently and query games from all past online chess tournaments from chess.com, lichess.org, and more
- Worked with Node.js and React to design a scalable web application that uses a MongoDB database to store 300k+ chess events, games, and players

### Pathway Foundation

Bellevue, WA

*Project Lead of Digital Platform*

Aug 2020 - May 2023

- Led a team of 6 other interns in the design, creation, and maintenance of [www.pathwayus.org](http://www.pathwayus.org) and [www.tutoring.pathwayus.org](http://www.tutoring.pathwayus.org) for the foundation, serving hundreds of visitors a week

## PROJECTS

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### Triage *PerplexityAI, Next.js, SAM 2.0*

<https://devpost.com/software/triage-k7vr5n>

First-Place Winning Hackathon Project for Best Use of PerplexityAI at Dubhacks 2024. A real-time disaster detection and relief tool that uses satellite imagery and computer vision to prioritize emergency response and rescue efforts. Built with Next.js framework and Python Flask backend with Intel Tiber for cloud hosting and AWS CloudFormationStack to facilitate SAM 2.0 CV model and PerplexityAI LLM.

### CipherBot *Discord.py, Microsoft SEAL, CoinMarketCap API*

<https://github.com/xckev/CipherBot>

Data encryption Python Discord bot; deployed to 10+ servers, serving 500+ users. Emulation of mix-networks and homomorphic encryption for secure voting, motivated by improving modern election integrity.

## AWARDS

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### First Prize Winner of DubHacks Hackathon

Major League Hacking

Won first place for "Best Use of Perplexity AI" at DubHacks, the largest Hackathon in the PNW

Oct 2024

### AIME Qualifier & AMC Distinction

Mathematical Association of America

Scored in the top 2.5% of AMC participants to qualify for the AIME

2021 & 2022

### USACO Gold Division

USA Computing Olympiad

Achieved a perfect 1000 in the USACO Open, ranking 1st among 2449 silver division participants

2022-2023

## SKILLS

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Programming Languages: Python, Java, C++, C, JavaScript, TypeScript, HTML/CSS, Swift, SQL, Assembly  
Software Development: Data Structures, Algorithms, Object-Oriented Programming, Git, Fullstack