

# Kenneth Liu

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## EDUCATION

### Stanford University

Bachelor of Science in Computer Science, GPA: 4.115/4.0

Stanford, CA

June 2029

## WORK EXPERIENCE

### Undergraduate Researcher

Stanford Artificial Intelligence Laboratory

Stanford, CA

Jan. 2026 – Present

- Researching the applications of cost-efficient collaboration between on-device and cloud language models in agentic workflows

### Backend Software Engineer

Stanford Carta

Stanford, CA

Jan. 2026 – Present

- Selected for an engineering role within Stanford's data-driven course planning platform using **ASP.NET**, **C#**, **PostgreSQL**, and **Docker**.

### Software Engineering Intern

LastingLearn, Inc.

Stanford, CA

Oct. 2025 – Dec. 2025

- Architected an **AI-native** SAT prep platform using **React** and **Express.js**, integrating LLMs to generate personalized practice problems based on student performance history.
- Engineered a high-performance leaderboard using **Redis** Sorted Sets, reducing query latency by **90%** compared to standard SQL aggregations and handling **500+** concurrent updates.

### Software Engineering Intern

Baker Engineering and Risk Consultants, Inc.

Houston, TX

Jun. 2024 – Aug. 2024

- Developed event tree analysis software in **C#/.NET WPF** with dynamic tree editing, reducing analysis time by **80%**

## PROJECTS

### BobaFinder | Python, LangGraph, LangChain, MongoDB Atlas

- Built **multi-agent** market entry research system determining the best location for a boba chain restaurant
- Used **LangGraph Swarm** to enable multi-agent collaboration

### Decanter 🔄 | JavaScript, React, Typescript, Next.js, Node.js, Supabase, PostgreSQL

- Built volunteer management platform for Science Olympiad tournaments using **Next.js** and **Supabase**, implementing Google **OAuth** authentication, attracting **75+** users in the first month
- Used **Vitest** to automate unit testing on server functions with **97%** code coverage, enhancing codebase resiliency

### Remix 🔄 | JavaScript, TypeScript, React, Vite, Github Actions

- Developed a **React** application that resequences Spotify playlists to create smooth transitions based on audio features, reducing average Euclidean distance between audio feature vectors by **58%**
- Integrated **Spotify OAuth** for secure access to playlists and deployed static site with **Github Actions**

### OttoGrade | Python, Flask, SymPy

- Built a full-stack web application to accelerate assignment grading for teachers
- Developed **Flask API** for automated math grading with **SymPy** integration, achieving **92%** accuracy processing handwritten math with OCR
- Demoed automated math grading technology to the **US Air Force Academy Preparatory School**, receiving adoption interest for integration into high school classrooms

## TECHNICAL SKILLS

**Languages:** C#, C++, CSS, HTML, Java, JavaScript/TypeScript, Python

**Tools:** Azure DevOps, Git, Linux, VS Code, Visual Studio

**Frameworks:** Express.js, React, .NET, Next.js, Node.js

**Databases:** SQL, MongoDB, PostgreSQL

## HONORS

3x American Invitational Mathematics Examination (AIME) qualifier

American Computer Science League Bronze Medal