Kenneth Liu

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EDUCATION

Stanford University   Stanford, CA
Bachelor of Science in Computer Science, GPA: 4.115/4.0   *June 2029*

WORK EXPERIENCE

Undergraduate Researcher   Stanford, CA
Stanford Artificial Intelligence Laboratory   *Jan. 2026 – Present*
- Researching the applications of cost-efficient collaboration between on-device and cloud language models in agentic workflows

Backend Software Engineer   Stanford, CA
Stanford Carta   *Jan. 2026 – Present*
- Addressed **7 CVEs** and improved request performance by **15%** by migrating legacy .NET 6 backend to **.NET 8 LTS**
- Reduced **front-end CI/CD pipeline latency** by **44%** by switching from legacy create-react-app builds to **Rsbuild (Rspack)**

Software Engineering Intern   Stanford, CA
LastingLearn, Inc.   *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   Houston, TX
Baker Engineering and Risk Consultants, Inc.   *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