

# MIKE LUU

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## EDUCATION

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**University of Southern California** **May 2027**  
*Bachelor's, Applied and Computational Mathematics*

**Chapman University** **May 2025**  
*Bachelor's, Computer Science* GPA: 3.9

## SKILLS

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**Skills:** Postgres, SQLite, SQL, AWS, Google Cloud Platform, Cloudflare, Docker, Git, TypeScript, JavaScript, Go, Python, Pytorch, REST APIs, gRPC, Next.js, Pandas

## PROFESSIONAL EXPERIENCE

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**Korea University NLP&AI Lab** **South Korea**  
*Machine Learning Engineer Intern* *June 2025 - August 2025*

- Supported building the Korean benchmark for a Vision Language model with 500 different data points
- Implemented and tested the Representation Efficient Fine Tuning (REFT) method for LLM that is 10-50x more parameter-efficient than Parameter Efficient Fine Tuning (PEFT) for LLM.

**Pac-Dent** **Brea, CA, USA**  
*Software Engineer & IT Intern* *December 2024 - February 2025*

- Built a Slicing and Support API for 3D printing dental model with Python. Automated data entry with Microsoft Power Automate and Golang API endpoints.
- Provided IT support to sale and marketing departments.

**Perplexity AI** **Orange, CA, USA**  
*Campus Strategist / Volunteer* *August 2024 - October 2024*

- Share and get 50 new users for Perplexity consisting of undergraduates, master, and Ph.D students at Chapman University
- Create 3 different Perplexity Spaces such as Calculus, Discrete Math, Computer Science to help students prepare for finals.

**Yboard** **Los Angeles, CA, USA**  
*Founder* *June 2024 - November 2024*

- Led the launch of an innovative AI note-taking app hosted on Cloudflare, managing the development of advanced search capabilities including BM25 and Vector Search
- Managed the implementation of hybrid retrieval methods, resulting in a 10x improvement in response time and 15% increase in accuracy
- Conducted extensive market research, engaging with 100 potential customers to validate product-market fit

## PROJECTS & OUTSIDE EXPERIENCE

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### Distributed Key-Value Database in Go

- A Go-based key-value store that runs across 5 servers, handling 5,000 operations per second with fast response times (under 5ms)
- The system was implemented as a personal cache solution to improve application performance
- It scales efficiently with up to 12 servers before performance gains diminish.

### WebRTC Video Conferencing in Go

- Built a peer-to-peer video system using Pion WebRTC library in Go that outperforms WebSocket solutions with 60% less bandwidth usage and 85% reduced server load
- Implemented complete signaling architecture that establishes direct connections between users rather than routing all video through servers.

### AI Health Challenge Generator

- Developed a personalized health challenge application using TypeScript, Convex, Next.js, Vercel AI SDK, and Gemini API that dynamically generates tailored fitness activities based on user prompts
- Ran a team of 3 students and had 15 computer science students to create their own challenges during the Hackathon.