

ETHAN CHIU

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EDUCATION

University of Southern California  
Bachelor of Science, Computer Science

Los Angeles, CA  
September 2023-May 2027

- GPA: 3.2/4.0

EXPERIENCE

Booksnake  
Software Engineering Intern

USC Ahmanson Lab, CA  
August 2025-Present

- Focused on designing and implementing gesture-based and touch-based interaction techniques for selecting, grouping, and manipulating multiple 3D archival objects in augmented reality using Unity and ARKit

Quasitek  
AI Application Intern

Taipei City, TW  
July 2025-August 2025

- Designed a speech-driven Retrieval-Augmented Generation (RAG) assistant integrated with startup’s VR applications, enabling users to ask questions and receive contextual, document-grounded answers with average response latency < 2 seconds
- Constructed end-to-end RAG pipeline with tuned BAAI BGE embeddings and rerankers (93% retrieval accuracy), implementing LangChain-based data ingestion and ChromaDB vector storage to enhance response quality in VR training applications
- Shipped a modular FastAPI backend and Next.js control panel for Q&A and retrieval, lowering maintenance overhead by 50%

Quasitek  
Software Engineering Intern

Taipei City, TW  
July 2024-August 2024

- Created full-stack ASP.NET web application to allow teachers to manage more than 1K students, grades, classes, and courses for the Workforce Development Agency, Ministry of Labor, Taichung-Changhua-Nantou Regional Branch
- Built full-stack MVC web application with Azure SQL Server backend and Blazor/Bootstrap frontend, collaborating with UI/UX designer to meet client requirements
- Achieved 100% accuracy on desired functions specified in FSD and wrote unit tests and deployment manual for team members to test through Notion: <https://shorturl.at/ErpJQ>

ACADEMIC PROJECTS

Calendar Agentic AI Assistant  
AI Software Engineer

New Taipei City, TW  
May 2025-August 2025

- Constructed agentic Calendar AI interprets natural language to autonomously list, create, or modify Google Calendar events with email confirmations, achieving 97% tool-selection accuracy through prompt engineering and fine-tuning
- Implemented tool-calling system with NLP entity extraction for dates/times, attendees, and locations, utilizing LangGraph workflow for persisted session memory to route the correct action and support follow-ups with 95%+ intent resolution accuracy
- Deployed FastAPI backend on AWS EC2 behind Nginx (HTTPS) and a React/Next.js + Tailwind frontend on Vercel; configured CORS, health checks, and basic CI

Lyrical Soulmate Web Application  
Full-Stack Developer

Los Angeles, CA  
August 2024-May 2025

- Engineered a full-stack music analysis web app visualizing lyrical patterns by extracting and processing user-selected song lyrics via the Genius API to generate dynamic word clouds
- Implemented end-to-end testing with Cucumber and integration testing with Jest, achieving 100% code coverage
- Managed development using Scrum methodology with biweekly sprints, task breakdowns, and retrospectives tracked in GitHub

SpatialSC  
Virtual Reality Software Developer

Los Angeles, CA  
January 2024-May 2024

- Developed a VR swipe keyboard prototype using Unity and Swift for Apple Vision Pro, enhancing typing speed by 50%
- Tested software by anchoring pointer to hand-tracking landmark of right index finger and outputting real-time XYZ position values, identifying a 15% latency

TECHNICAL SKILLS

- Programming Languages: Python | C/C++ | C# | Java | JavaScript/TypeScript | Swift | SQL
- Technologies & Tools: AWS EC2, Nginx, Azure SQL Server, Git, FastAPI, React/Next.js, ASP.NET/Blazor, Unity, ARKit, Firebase