Hongsuh (Harry) Ahn

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EDUCATION

University of Southern California – Viterbi School of Engineering — Los Angeles, CA
B.S + M.S in Computer Science (Accelerated PDP) | GPA: 3.61/4.0 (Dean's List) — *May 2027*

TECHNICAL SKILLS

Languages: Python, JavaScript, C++, Swift, Java | **Frameworks & Libraries**: React/Next.js, Node.js, Express, FastAPI |
Databases: PostgreSQL, MongoDB, SQLite | **Tools**: Git, Vercel, Railway, Supabase, Docker, Postman, Figma, Selenium |
Data/ML: LLMs, SentenceTransformers, FAISS, Hugging Face, LangChain, NumPy, ETL, BI Dashboarding

EXPERIENCE

Founding Engineer — Summer 2025 – Present
Dayli (Pre-Seed) — *Remote*

- Spearheaded the development of a mobile-first group coordination app, integrating **AI-powered assistants** to provide intelligent suggestions and streamline end-to-end planning workflows.
- Designed and implemented robust full-stack architecture utilizing **React Native, Next.js, and Supabase** to facilitate real-time, structured communication with **live data synchronization** across diverse client platforms.
- Built and optimized an **LLM-driven intent interpretation engine** for precise classification of natural language inputs and dynamic routing to relevant planning modules.
- Delivered critical production features, encompassing seamless cross-platform deployment (iOS, Android, web) and robust **two-way synchronization with cloud calendar APIs** for enhanced scheduling.

Full-Stack Software Developer — Spring 2025 – Present
USC University Advancement – Business Intelligence Team — *Los Angeles, CA*

- Developed and maintained **full-stack internal systems** using **React, JavaScript, and Python** to support USC's **institutional giving infrastructure** across **10+ departments**, ensuring **data security and compliance**.
- Enhanced workflow efficiency by building **custom SPFx web parts** with **React and JavaScript** for a centralized web hub.
- Integrated **LLM-powered NLP search** into internal BI tools to surface relevant documentation and insights from **dense BI dashboards**, enabling faster decision-making across Advancement teams.

Founding Engineer — Spring 2025 – Summer 2025
Lily @LavaLab USC — *Los Angeles, CA*

- Led **full-stack development** of an **AI-powered special education platform**, serving **13+ school districts**.
- Engineered an innovative **AI-driven logging system** (voice/text/manual) that automatically structures **multi-student/session data** to generate standardized quantitative progress updates and qualitative memos.
- Architected and built a robust **data pipeline** using **NLP**, **regex**, and **Pydantic** for efficient IEP document parsing.
- Implemented a secure, **HIPAA/FERPA-compliant backend** featuring **AES-256 encryption** to protect sensitive student data.

Software Engineering Intern — Summer 2023
Qraft Technologies — *Central, Hong Kong SAR*

- Automated daily stock allocation data processing using **Python**, **Selenium**, and **Jupyter**, building reusable **ETL pipelines** that reduced manual overhead and improved team efficiency.
- Streamlined data workflows by scripting automation tools to **extract, clean, and transform** data, integrating into the asset management process to optimize accuracy.

PERSONAL PROJECTS

Semantic Music Analyzer | *FastAPI, CLAP, TTMR++, FAISS, LLaMA2, Demucs, Next.js* — April 2025

- Designed a pipeline that extracts stems and semantically embeds tracks using CLAP and TTMR++ encoders.
- Indexed embeddings in multi-vector FAISS for cross-modal similarity search and genre/instrument-aware retrieval.
- Generated natural language tags and summaries with LLMs, leveraging nearest-neighbor metadata and audio context.

TooLate.ai | *Next.js, FastAPI, FAISS, SentenceTransformers, GraphQL, TogetherAI* — April 2025

- Built an LLM-powered platform that analyzes and compares AI startup ideas against scraped multi-source data.
- Engineered multi-threaded scrapers and GraphQL pipelines with randomized batching and rate-limit handling.
- Used RAG with FAISS + SentenceTransformers for GPT-backed feedback on idea positioning and pivots.

Flexor | *PostgreSQL, ExpressJS, ReactJS, NodeJS, WebSockets* — August 2024

- Developed a full-stack social platform with real-time posting, alert systems, and user authentication.
- Built scalable REST APIs and scalable backend designed for 100K+ users with WebSocket-based update syncing.
- Improved engagement through polished UI/UX and reactive client-side rendering using pagination.