

Stephen Hung

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Education

University of California, Berkeley

Bachelor of Science in Electrical Engineering and Computer Sciences

Expected: May 2027

- **Coursework:** Data Structures, Comp. Architecture, Discrete Math, Algorithms, Comp. Security, Artificial Intelligence
- **Activities:** Theta Tau (Co-ed Professional Engineering Fraternity), Blueprint (Nonprofit Technology Solutions Club)

Skills

Programming Languages: Python, JavaScript (ES6+), TypeScript, Java, C++, C, Ruby, SQL, MATLAB, HTML5/CSS3

Libraries/Frameworks: React.js/Native, Node.js, Express.js, FastAPI, Next.js, Tailwind CSS, LangChain, TensorFlow

Developer Tools: Git, GitHub, Postman, Docker, VS Code, Figma, Notion, Vercel, Render, Slack, Linear, Prettier, ESLint

Databases & Cloud: MongoDB, Firebase, Supabase, AWS (S3, EC2, Lambda), GCP (Cloud Storage, Vertex AI), Redis

Relevant Certifications: Stanford Machine Learning Specialization, Google IT Automation with Python Specialization

Experience

Software Developer

Blueprint, Replate Food Rescue Platform

Berkeley, CA

Sept 2025 – Present

- Developing a mobile app using **React Native** and **Expo** to digitize food donation tracking for partner nonprofit orgs.
- Architected full authentication system with signup, login, account management, and comprehensive error handling using **React Native forms** and **React Context API**, extending Replate's **Ruby on Rails** backend with secure API endpoints.
- Designed polished authentication UI with consistent design patterns across flows, implemented form validation with user-friendly error messages, and documented authentication architecture for team onboarding and future feature development

Software Engineering Intern

Berkeley, CA

OptiGenix

May 2025 – Aug 2025

- Achieved **92.3% extraction accuracy** on labeled test data by training a **generative AI** model using Google Vertex AI, structuring detailed blood marker data from **60 unstructured blood test PDFs** stored and processed in **GCP**.
- Enabled secure and scalable ingestion of clinical data by designing and deploying **HIPAA-compliant workflows** on **Google Cloud Platform (GCP)**, supporting 7,500+ monthly PDF uploads with **Cloud Storage, IAM role-based access control, server-side encryption**, and comprehensive **audit logging and monitoring** for compliance/tracing.
- Led backend migration from **Supabase** to **Firebase**, redesigning authentication and database schema logic, reducing **infrastructure costs by 35%** through optimized storage, efficient API design, and elimination of redundant services.

Projects

darwin (Multi-Agent Coding Platform) - Cal Hacks | *React, Letta, LiveKit, Sui, 3.js*

[GitHub Repo](#) ↗

- Built 6-agent orchestration system with interactive dashboard and animated avatars where 4 AI agents code UIs from natural language while a commentator agent analyzes rendered outputs via screen capture and provides live narration
- **Blockchain-powered RL** feeding tipped code back to agents through **Letta** cross-agent memory for preference learning.
- Engineered real-time platform with **LiveKit STT** for voice commands, **ElevenLabs TTS** for agent commentary, live interactive chat where agents debate approaches and modify code simultaneously, and gasless **Sui blockchain** tipping.
- Developed full-stack React app with audio-reactive **Three.js/WebGL** visualizations synced to voice frequencies, animated agent avatars, code editor with preview panel, and synchronized real-time multi-spectator collaborative viewing.

ClarifAI (AI Research Agent) - NVIDIA AI Agent Hackathon | *FastAPI, LangChain*

[GitHub Repo](#) ↗

- Led development for a **full-stack** web application that uses **agentic AI** to deconstruct research papers into key concepts, providing users with executable code implementations, animated explanatory videos, and QnA's about uploaded content.
- Engineered a **self-correcting LangChain agentic** pipeline capable of writing, executing, debugging, and stitching Manim animation code across multiple iterations for reliable video production and real time logging using **Websockets**.

craekd.co (AI Talent Finder) - BELLE AI Hackathon | *React, GitHub GraphQL, Gemini*

[GitHub Repo](#) ↗

- Developed a **web application** that identifies talented software developers using a hybrid AI model combining **quantitative GitHub metrics** with **qualitative LLM code analysis** to rank developers based on natural language queries.
- Implemented a **FastAPI backend** with Docker containerization and integrated **GitHub GraphQL API** for comprehensive repository analysis, along with **Google Gemini LLM/PCA** for intelligent developer assessment and ranking.

SpotifyTUI (Terminal Music Platform) | *Python, TypeScript, Tensorflow.js, Node.js*

[GitHub Repo](#) ↗

- Architected music client with **TensorFlow.js neural network** trained on 20D audio feature vectors for mood-based music classification, integrating **OAuth2-authenticated Spotify** and **Genius APIs** for playback and lyrics retrieval.
- Engineered serverless backend API with **intelligent caching**, comprehensive error handling, and automatic fallback mechanisms for API failures, capable of processing **1000+ requests per minute** with **15ms** average response times.

InStephGram (Media Sharing App) | *React, Node.js, Express.js, MongoDB, AWS S3*

[GitHub Repo](#) ↗

- Built a full-stack social media platform with secure user authentication, photo/video upload functionality to **AWS S3** with **FFmpeg** media processing and user interactions, using **React, Chakra UI, Node.js/Express**, and **MongoDB**.