

KyungTae Kim

(917) 487-8930 | kimkyungtae12386@gmail.com | kt-portfolio-nu.vercel.app | github.com/KyungTae0820

EDUCATION

University of Southern California, Viterbi School of Engineering
Bachelor of Science in Computer Science

Los Angeles, CA | Aug. 2022 – May. 2027
USC Merit Scholarship Finalist; Viterbi Dean's List

EXPERIENCE

Iris AI

Software Engineer Intern

Remote

June. 2025 – Aug. 2025

- Constructed a high-performance real-time chat platform in TypeScript/Expo with Firebase Auth, Firestore, and WebSocket, enabling secure, scalable messaging and automated backups, while also contributing to Ruby backend APIs
- Improved media upload and reduced message latency by 30% by incorporating Firebase Phone OTP login with reCAPTCHA and a Redux-based state system for iOS (Swift/Objective-C) and Android

HairDAO

Software Engineer Intern

Los Angeles, CA

Sep. 2022 – Dec. 2022

- Redesigned and rebuilt HairDAO's open-source web platform in React.js, modernizing the UI and enhancing usability for an Ethereum-based investment and operations startup utilizing the \$HAIR native token
- Coordinated with backend engineers to integrate a knowledge graph (Nodes/Entries model), achieving 96% reliability in data synchronization through rigorous debugging and optimization

MIT BeaverWorks Summer Institute

Machine Learning Research Trainee

Cambridge, MA

May. 2021 – July. 2021

- Drove predictive ML model training (ANNs, k-NN, SVM, Naive Bayes) with teammates, achieving 93%+ accuracy through optimized preprocessing, feature selection, and hyperparameter tuning
- Leveraged scikit-learn, Pandas, Matplotlib, and Jupyter to develop, evaluate, and visualize predictive models for Medlytics
- Collaborated in team projects using Git branching strategies to ensure code reproducibility and version control

PROJECTS

VIOLA – Startup CRM SaaS | Node.js, TypeScript, Clerk, Supabase, PostgreSQL, LLM

Sep. 2025

- Designed and implemented a full-stack CRM SaaS web application for the music industry, applying object-oriented principles, Clerk-based authentication with webhook integration, and PostgreSQL RLS for secure data access control.
- Architected and deployed a scalable Hugging Face-powered LLM recommendation pipeline, applying data modeling and distributed inference via API integration to deliver personalized music suggestions with evaluated Precision@k \approx 0.6.
- Enhanced platform scalability and reliability by modularizing TypeScript and integrating RESTful APIs, while improving UX/UI through Framer Motion animations and iterative team collaboration.

Embedded Thermostat Monitoring Alarm System | C++, AVR, PWM, EEPROM, OneWire

May. 2025

- Engineered a full-stack embedded system on an AVR microcontroller in C++ for real-time temperature monitoring (0.1°F precision) with dynamic thresholds (50–90°F), breach-triggered alarms, and fault-tolerant EEPROM storage
- Crafted peripherals (LCD, rotary encoder, servo motor, RGB LED, DS18B20 sensor) via PWM, ISRs, and serial interfaces to enable responsive input, real-time feedback, and local/remote communication

Portfolio Web Development | React.js, Next.js, Node.js, JavaScript, HTML5, CSS, Vercel

Mar. 2025

- Spearheaded responsive web application with dynamic rendering, routing, and SSR, optimizing meta tags and structured data to boost SEO performance, load speed, and crawlability, reducing LCP by 52% (<2.5s, Google Search Console)
- Utilized Tailwind CSS for custom styling and Node.js for backend API integration, and deployed the application using Vercel for seamless CI/CD

Interactive Retail System Simulation | C++, STL, File I/O, Database

Feb. 2025

- Developed a simplified Amazon retail system in C++ supporting keyword-based search, cart management, and purchases by parsing product/user data with efficient file I/O and leveraging STL for scalable, fast queries

SKILLS

Languages/frameworks/tools: C/C++, Java, Python, Swift, Objective-C, JavaScript, TypeScript, Ruby, SQL, HTML/CSS, Tailwind CSS, React.js, Next.js, Node.js, Git, Docker, Figma, Xcode

Technical Competencies: Full-Stack Web & Mobile Development, Embedded Systems, Object-Oriented Design & Algorithms, Machine Learning & Neural Networks, LLMs, Data Science & Analysis

Relevant Coursework: Data Structures and Object Oriented Design, Principles of Software Development, Algorithms and Theory of Computing, Electrical Engineering in Embedded Systems, Calculus III, Linear Algebra, Statistics

Involvements: Engineer of TroyLabs, E-Board of KSEA, Member of Blockchain@USC, Member of AeroSpace Design