KyungTae Kim

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EDUCATION

University of Southern California, Viterbi School of Engineering — **Los Angeles, CA |** Aug. 2022 – May. 2027
Bachelor of Science in Computer Science — *USC Merit Scholarship Finalist; Viterbi Dean's List*

EXPERIENCE

Iris AI — **Remote**
Software Engineer Intern — 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 — **Los Angeles, CA**
Software Engineer Intern — 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 — **Cambridge, MA**
Machine Learning Research Trainee — 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 2021
- Collaborated in team projects using Git branching strategies to ensure code reproducibility and version control

PROJECTS

VIOLA | *Node.js, TypeScript, Clerk, Supabase, PostgreSQL* — Sep. 2025

- Architected a full-stack CRM SaaS web application for music industry, implementing Clerk-based authentication with webhook integration to sync user credentials into Supabase and applying PostgreSQL RLS for secure data access control
- Revamped dynamic user-specific rendering via RESTful API integration, enhanced frontend scalability with modular TypeScript
- Led UX/UI enhancement with Framer Motion animations and team feedback

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, HTML, CSS, Tailwind 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, 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: E-Board of KSEA, Member of Blockchain@USC, Member of AeroSpace Design