Samuel Kim

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EDUCATION

California State University Fullerton — 2023 – 2025
Bachelor of Science in Computer Science — *Fullerton, CA*

Cerritos College — 2018 – 2020
Association of Arts in Pharmacy Technology — *Cerritos, CA*

TECHNICAL SKILLS

Languages: C++, Python, JavaScript, C#, Java, HTML/CSS **Databases:** PostgreSQL, MySQL, SQLite, MongoDB
Frameworks: React, NextJS, Django, Django REST Framework, Node.js **Cloud Platforms:** Vercel, Railway, AWS
Developer Tools: Git, GitHub, VS Code, Visual Studio, Docker, AWS S3, CloudFront CDN, REST APIs, Vite, Flyway

RELEVANT EXPERIENCE

Consulting Software Engineer — Jan 2025 – Present
CodeDay & OpenEnergyDashboard (Open Source Project) — *Remote*
- Mentoring 10 to 15 students in 2 month long cohorts, improving debugging proficiency and reducing setup errors by 30%.
- Active Maintainer for the Open Energy Dashboard (Open Source): Regular contributor to a large codebase, performing code reviews on 40+ Pull Requests to ensure maintainability and safety in production systems.
- Improved onboarding efficiency by 30% (so far) by streamlining setup documentation and creating step-by-step guides, reducing setup time and errors for new contributors.
- Partnering with educators and maintainers to identify and resolve recurring blockers, fostering a smoother contributor experience and stronger engagement.

Lead Full-Stack Engineer — Oct 2024 – July 2025
Cerritos College Nursing Program (Capstone) — *Cerritos, CA*
- Led the end-to-end lifecycle of a full-stack EMR platform, replacing legacy Excel workflows and directly improving faculty grading efficiency by 40%.
- Architected a high-availability backend using Django REST Framework, achieving 85% test coverage and validating stability for 1,000+ simulated concurrent users.
- Established a production-grade CI/CD pipeline using Docker and GitHub Actions to ensure safe, systematic updates and consistent development environments.
- Partnered with non-technical stakeholders (nursing faculty) in Agile sprints to translate complex requirements into technical specifications and actionable features.

Supplemental Instruction Leader (Computer Science) — Jan 2024 – Present
California State University, Fullerton — *Fullerton, CA*
- Planned and led **C++**-focused interactive study sessions for an average of 5 students per session (10% of the class) to enhance their grades in three core programming classes: Intro, OOP, Data Structures.
- Achieved a 10% average grade improvement for attendees compared to students who did not attend.
- Taught primarily through setting up a "learn-by-doing" progression pathway.

PROJECTS

MapleStory Character Simulator
- Architected and launched a full-stack Next.js application to recreate a beloved community tool, attracting 440+ users in the first week of launch.
- Independently researched and reverse-engineered proprietary file formats (.wz), modifying a C# tool to build a custom data pipeline that processes 50,000+ assets for a modern web application.
- Developed Node.js scripts to parse, merge, and resolve UOL (link) references from thousands of XML files, seeding a MongoDB database with the unified data.
- Built a hierarchical React rendering engine that translates parsed origin vectors and map anchor points (x/y offsets) into precise CSS transforms for accurate sprite compositing.
- Optimized global asset delivery using AWS CloudFront and S3 to serve cached static assets, significantly reducing latency and server load during peak traffic.

CoLab Code (Full-Stack Collaborative Code Editor)
- Architected a full-stack, real-time collaborative editor using a React (Vite) frontend and Node.js backend, enabling multiple users to edit code simultaneously.
- Integrated the Etherpad API to manage real-time document synchronization, user sessions, and collaborative text processing.
- Containerized all application services (Node.js, React, PostgreSQL, Etherpad) using Docker Compose to ensure a consistent, reproducible development and deployment environment.
- Implemented Flyway for version-controlled database schema management, enabling systematic and safe updates to the PostgreSQL database.