KENI LAM

Creative Technologist & Software Engineering Leader

San Jose, California

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SUMMARY

I'm a technologist with an artist's eye and an engineer's mind. My background in fine art and design shapes how I approach technology: exploring possibilities, understanding people and turning complex ideas into thoughtful experiences and working systems. Over 15+ years, I've worked across product design, full-stack engineering and software architecture, building platforms and leading teams across the US and Japan. My experience spans AI-assisted development, distributed systems, design systems and product engineering, most recently at Apple and Tesla.

EXPERIENCE

Apple

MAR 2023 – PRESENT

Lead Software Development Engineer

- Lead design and engineering for Apple University's cross-platform ecosystem, spanning design systems, UX architecture, backend services and full-stack implementation.
- Architected a federated application platform comprising a Module Federation front end and Apollo Federation gateway across 20+ Node.js, PHP and Swift subgraphs, replacing a legacy PHP system. More than 10 federated mini-apps consume the shared component library and federated graph.
- Designed and scaled shared design systems across multiple products, improving UX consistency and development efficiency. Also built marketing and enterprise design systems.
- Modernized internal platforms for course scheduling and orientation, improving usability, performance and maintainability across distributed teams.
- Developed AI-assisted developer workflows using internal LLMs and Playwright MCP to orchestrate end-to-end testing, enabling QA agents to validate applications through headless Chromium and automated deployment pipelines.
- Built an MCP server exposing component-library capabilities and GraphQL gateway schemas, enabling non-technical product owners to prototype solutions and deploy them to isolated sandboxes.
- Designed asynchronous processing infrastructure using RabbitMQ for translation, scheduling, Workday and bulk-email workflows, and built the supporting email service.
- Work with product owners, designers and engineering stakeholders to translate business needs into technical solutions and deliver cross-platform experiences.

Tesla

JAN 2020 – MAR 2023

Staff Software Engineer

- Led UI/UX engineering for Tesla Energy's Solar platform, managing and mentoring an eight-person core team.
- Reduced system outages from more than 20 per week to near zero. Identified and resolved a platform-wide reliability issue caused by generated code opening a database connection pool on every request.
- Architected and implemented a GraphQL federation layer and Vite-based front-end infrastructure, establishing modular development across internal systems supporting Tesla Energy's global operations.
- Established front-end architecture standards and drove TypeScript adoption across the organization.
- Worked across engineering and product stakeholders to prioritize platform improvements, resolve operational issues and deliver reliable systems supporting energy operations.

Rakuten Ready

JAN 2019 – JAN 2020

Senior UX and Software Engineer

- Helped launch Rakuten Ready's pickup MVP and delivered delivery monitoring for its Chipotle partnership, working across product and partner requirements.

Indeed

MAY 2018 – JAN 2019

Manager, Design Technology

- Managed a cross-functional design technology team of four, hired two design technologists in San Francisco, and led quarterly performance reviews and calibration.
- Embedded design technologists within product teams, working with design and product stakeholders to roll out a new design system and website.
- Helped product teams prototype and deliver experimental features through weekly A/B testing.

Apple

JUN 2015 – MAY 2018

Interactive Developer, Retail Interactive

- Built and maintained three retail digital-signage products and a WeChat publishing tool, including the Apple Watch demo kiosk in every Apple Store and the Pricing app on in-store display devices.
- Delivered features and content across 30+ locales for every major product launch.
- Migrated build tooling from Grunt to Gulp and then Webpack, halving local build times, and automated build-to-deployment through Jenkins.
- Shipped a shared React framework across three signage products and optimized on-device performance for 4K video and @4x images.

eBay

JAN 2014 – JUN 2015

Design Engineer III, Human Interface Group

- Prototyped search results and item pages in collaboration with product teams. A left-navigation redesign increased engagement with third-level categories by 2% in Q4 2014.
- Contributed animation standards and UI components to the design system, and built the loading spinner that shipped on eBay.com.

EARLIER

- Senior UI Developer, Apple (contract via Tech Mahindra) · May 2013 – Jan 2014
- UI Developer, Apollo Group · Apr 2012 – May 2013
- Web and Product Designer, Hasco Enterprise, Osaka · Nov 2010 – Aug 2011
- Contract Web Designer, Le Ciel Bleu · Aug 2009 – Oct 2010

PROJECTS

Independent experiments exploring AI, software architecture, creative technology and robotics. Live at ki-cl.com/experiments, **with code at** github.com/kenilam.

- **Ki.CL platform.** My personal platform, built as a federated architecture. A React host loads a design-system remote and typed GraphQL client at runtime, backed by Apollo Server and MongoDB. Deployed on Google Cloud Run.
- Tree of Life. An interactive exploration of the Open Tree of Life's 2.3 million species. Each organism's illustration is generated on demand through a fixed AI pipeline with provider failover and vision-model review.
- Image Agent. A public prompt-to-image agent that asks up to three clarifying questions, reviews generated images with a second model, and applies rate limits, rule checks, moderation and classification.
- Factory Arm. A browser-based robotic palletisation experiment. Planning runs in web workers, while a Rust bridge relays Protobuf frames over WebSocket to a digital twin running in NVIDIA Isaac Sim.

TECHNICAL SKILLS

- **AI & Agentic Systems:** LLM applications, Claude, OpenAI and Groq APIs, MCP servers, AI-assisted development, agent orchestration, retrieval-augmented generation, structured outputs, model evaluation, multimodal workflows.
- **Backend & Distributed Systems:** Node.js, GraphQL, Apollo Federation, microservices, API design, gRPC, RabbitMQ, event-driven architecture, MongoDB, SQL, WebSockets, Python.
- **Cloud & Platform Engineering:** Google Cloud Platform, Cloud Run, Docker, CI/CD, GitHub Actions, Jenkins, deployment automation, system reliability.
- **Frontend & Architecture:** TypeScript, React, React Native (Expo), Next.js, Vue, Vite, Webpack, Module Federation, Three.js, WebGL, Sass, Tailwind.
- **Design & Accessibility:** Design systems, component libraries, UX architecture, prototyping, Figma, Sketch, Framer, W3C standards, web accessibility (A11Y), internationalization (i18n).

MENTORING

ADPList mentor: 426 sessions and 21,000 minutes supporting designers and engineers, with 52 reviews. Ranked in the top 10% of mentors in my field. adplist.org/mentors/keni-lam

EDUCATION

- MA Applied Imagination, Central Saint Martins, University of the Arts London · 2008
- BA Fine Arts (Painting / Sculpture), University of Brighton · 2003
- Foundation in Art and Design, University of the Arts London · 2000

LANGUAGES

English, Cantonese, Mandarin and Japanese (native or bilingual proficiency).