

David Kobia

Head of Engineering · Principal/Staff Engineer · AI-Native Systems Architect

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01 SUMMARY

Hands-on engineering leader and full-stack builder who still ships production code. I architect and personally implement AI-native systems end to end — RAG pipelines, agentic workflows, LLM evaluation, backend services, infrastructure, and security. I move fluidly between writing critical code as an individual contributor and leading high-performing teams, and I have a track record of taking ambiguous problems to scaled, production-grade products used by hundreds of thousands of people.

02 CORE STRENGTHS

AI / LLM Engineering: Retrieval-Augmented Generation (RAG), agentic workflows & state management, LLM output evaluation & quality control, prompt engineering & context design, AI workflow automation & chaining, LLMOps / MLOps.

Full-Stack Engineering: Frontend, backend, mobile, embedded, DevOps and cloud infrastructure — owned and delivered personally across the entire stack.

Security: SOC 2 audit ownership, penetration testing, bug-bounty program operation, secure data architecture, encryption, threat modeling.

Leadership: Building and leading distributed engineering teams, technical strategy, architecture decisions, mentoring, and delivery.

03 EXPERIENCE

Head of Engineering / Trustworthy

2020 - Present

AI-native consumer platform ("The Family Operating System®") that organizes, secures, and answers questions about families' most sensitive information.

- Architect and personally build core AI systems — designed and implemented the RAG pipeline that turns unstructured family documents into accurate, grounded answers, including retrieval, chunking, embedding, and context-design strategy.
- Built agentic workflows and state management that autonomously classify, extract, link, and file documents and drive AI-generated outcomes for customers.
- Designed an LLM output evaluation and quality-control framework — automated and human-in-the-loop evals to measure accuracy, catch regressions, and gate releases of AI features.
- Own advanced prompt engineering and context design across the product, and built internal AI tooling for assisted project management and delivery forecasting.
- Established LLMOps/MLOps practices — versioning, evaluation harnesses, observability, and safe rollout for LLM-driven features in production.
- Drive a security-first engineering posture in a product handling highly sensitive data: own SOC 2 audits, coordinate third-party penetration testing, run a bug-bounty program, and design encrypted, privacy-preserving data architecture.
- Lead the engineering organization — hiring, technical strategy, architecture, and standards — while remaining hands-on in the most critical and complex parts of the codebase.

Founder & Principal Engineer / Kidplay Technologies

2022 - Present

Independent venture — a portfolio of consumer parenting apps designed, built, and operated single-handedly.

- Sole engineer, designer, and operator of a multi-app portfolio (Doggy Time, Potty Whiz, and more) with over 500,000 combined downloads — owning the entire stack solo: cross-platform mobile (iOS, Android, watchOS), backend, sync infrastructure, cloud, analytics, and support.
- Demonstrates sustained ability to take products from concept to scaled, revenue-generating release as a pure individual contributor.

Engineering Manager / Lab1886 (Daimler / Mercedes-Benz)

2018 - 2019

Corporate innovation incubator validating and building new digital ventures.

- Served as full-stack developer and technical lead on rapid proofs of concept, owning architecture and technology stack decisions.
- Performed technical validation of startup ventures and stood up engineering teams to take concepts forward.

Principal Systems Architect / StreamLabs (Reliance Worldwide)

2016 - 2020

Smart-home water-monitoring hardware + software platform; product now sold at Home Depot, Lowe's, Best Buy, and Amazon.

- Architected, designed, and implemented a scalable system serving tens of thousands of users and hundreds of thousands of connected devices.
- Designed and built third-party APIs serving enterprise customers, and led performance, scalability, and cost-optimization work.
- Built and led a cross-functional engineering team (backend, embedded, mobile, frontend, QA, DevOps) and drove automation across solution delivery.

Director of Software / BRCK

2014 - 2016

Rugged, self-powered connectivity hardware + software for low-infrastructure environments.

- Led planning, design, development, and deployment of firmware and cloud software powering a remotely managed mobile WiFi hotspot.
- Delivered an education-technology platform and a content management / distribution network for streaming media from edge devices.
- Built and led a globally distributed hardware and software engineering team.

Director of Technology & Co-Founder / Ushahidi

2008 - 2014

Open-source crisis-mapping and crowdsourcing platform used worldwide.

- Built and led a global team delivering open-source web and mobile technologies used in 100+ countries, translated into 30+ languages, reaching 20M+ people.
- Delivered solutions for clients including the United Nations, U.S. Southern Command, and Conservation International.
- Advised and helped launch spin-off organizations including iHub (Nairobi's technology innovation hub) and Gearbox (a hardware-entrepreneur ecosystem).

Earlier Experience: Software engineering and design roles across multiple technology companies, spanning full-stack product development.

04 TECHNICAL SKILLS

AI / ML: RAG, vector search & embeddings, agentic workflows, LLM evaluation, prompt & context engineering, LLMops/MLOps, AI workflow orchestration

Languages: Python, TypeScript / JavaScript, Go, Swift, Kotlin, Java, C

Backend & Web: Node.js, React, Next.js, REST/GraphQL APIs, microservices, event-driven systems (Kafka, Kinesis)

Data: PostgreSQL, DynamoDB, Redis, vector databases, Elasticsearch

Cloud & DevOps: AWS, Azure, Google Cloud, infrastructure-as-code, CI/CD, containerization, observability

Security: SOC 2, penetration testing, bug-bounty programs, encryption, secure data architecture, threat modeling

Mobile: iOS / Swift, Android / Kotlin, Flutter, React Native, watchOS, cross-platform sync

05 RECOGNITION & EDUCATION

MIT Director's Fellow · MIT Technology Review TR35 (Top Innovator Under 35) · MIT Technology Review Humanitarian of the Year · Fast Company Most Creative People in Business · Knight-Batten Award for Innovation in Journalism

Computer Science / University of Alabama at Birmingham