

Eric Kennedy

Product-minded software engineer specializing in applied AI, distributed systems, and backend infrastructure. I thrive in ambiguous problem spaces: turning early product ideas into production systems, designing the architecture, shipping quickly, measuring outcomes, and owning reliability as usage scales.

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1M+

Annual customer interactions powered by AI systems I helped build

\$25M+

Measured business impact from AI matching and optimization

Stealth → \$159.8M annual revenue

Helped scale Ethos from stealth through hypergrowth during my tenure

LANGUAGES & TECH

- TypeScript
- JavaScriptPython
- GolangJava
- PostgresReact
- CSSKubernetes
- TerraformDocker
- KafkaRedis
- AWS S3 SQS
- SNS RDS
- PyTorch
- OpenSearch
- Vector Search
- EmbeddingsFaiss
- HNSWNext.js
- Tailwind
- SQLAlchemy
- FastAPIExpress
- KoaMuxGin
- StripeCloudinary
- OAuthDebezium
- AvroDatadog
- SplunkArgo CD
- GitHub Actions
- pganalyze

PROFESSIONAL EXPERIENCE



Intuit

2024 - Present

Senior Software Engineer | intuit.com

- Virtual Expert Platform:** Built AI-powered marketplace, recommendation, and real-time workforce-optimization systems powering products including TurboTax Live and QuickBooks Live, connecting **4.2M customers with 26K experts** at tax-season peak.
- AI matching:** Scaled AI-driven matching from 0.2% to **36% of contact-center traffic** across **1M+ annual interactions**, delivering **\$11.4M in 2025** business impact by leading development of a platform using transcript analysis, embeddings, and agentic workflows. Patent filed.
- Automated routing:** Delivered **\$14M in 2026** business impact by re-architecting AI matching into a fully automated, real-time routing system. Built a Kafka stream processor handling **3K+ messages per second** that used historical transcripts to build an OpenSearch vector store, then matched incoming customer data against those interaction embeddings to generate personalized expert assignments at customer contact.
- Agent gateway:** Eliminated **thousands of hours** of manual work for **90+ weekly active users** by leading development of a hosted agent gateway for 20+ domain-specific AI agents across contact-center operations. Built the shared runtime, access controls, tool integrations, collaborative sessions, and interfaces for web, Slack, Claude Code, and service APIs.
- Transcript intelligence:** Built two LLM systems over customer conversations. A Bring Your Own Prompt platform ran customizable analysis across thousands of transcripts for tax policy compliance detection with **95.5% precision**, QA at scale, and expert skill gap analysis. A separate pipeline built an intent taxonomy for labeling and storing customer intents in OpenSearch for use across multiple models. It used a **Faiss/HNSW semantic cache** to reuse known taxonomy labels or surface new candidates.
- Observability:** Spearheaded obs-as-code (Terraform/IaC for observability) to move alert delivery from a quarterly observability sprint into the regular development cycle. Colocated alert definitions with application code, increasing output from **10 alerts per quarter to 5 per week** and eliminating the need for engineers to learn the Splunk UI.
- Reliability:** Resolved a **two-week production incident causing 2 overnight on-call pages per week** by diagnosing and fixing a memory leak. Used heap dumps, thread dumps, and Prometheus to trace a cascade from heap OOM through consumer-thread exit and blocking queue deadlock to pod failure. Implemented graceful shutdown and Kubernetes SIGTERM rollback handling to prevent in-flight data corruption.



AnimePics

2023

Founder | animepics.xyz

- Product:** Built and launched a **paid consumer GenAI product** that turned customer photos into personalized anime portrait galleries. Owned the end-to-end experience from package selection and Stripe checkout through validated uploads, async GPU fulfillment, and email delivery.
- ML pipeline:** Built a GPU-backed pipeline that **fine-tuned a text-to-image diffusion model** on each customer's uploaded photos to generate recognizable portraits across multiple anime styles. Customized training with dynamic epochs and regularization, then used PyTorch to merge each personalized model with selected style models before prompt-based generation, high-resolution correction, and upscaling.

FOCUS & STRENGTHS

Applied AI systems and agent platforms

Event-driven platform architecture

Postgres, data modeling, and migrations

Kubernetes, deploy automation, and observability

PORTFOLIO LINKS

[AI contact-center matching](#)

[AI agent gateway](#)

[Event bus architecture](#)

[Animepics](#)

EDUCATION

[Northwestern Economics](#), 2014

[Bradfield CS Databases, Networks, Computer Architecture, Deep Learning](#), 2018

- **Frontend:** Built a mobile-first purchase and upload flow with Next.js, TypeScript, Tailwind, Zustand, and React Query. Added **client-side face detection and smart cropping** to reject invalid photos and generate model-ready 512x512 inputs before training.
- **Backend:** Built a Python order and fulfillment system with Starlite and SQLAlchemy. Persisted order state in Postgres, stored photos in S3, and used Kafka for **durable handoffs to GPU workers** and back to the web service for gallery persistence and email delivery.
- **Payments and auth:** Built **guest and authenticated checkout** with Stripe, Google and Apple OAuth, and passwordless email. Customers could purchase before creating an account, then return securely to upload photos or view completed galleries.



Ethos

2018 - 2023

Staff Software Engineer | ethoslife.com

- **Early engineer:** Helped scale Ethos from stealth to **\$159.8M in 2023 revenue** and **100+ engineers** after joining pre-launch as the company's 3rd engineer. Built foundational frontend and backend systems that became core company infrastructure.
- **Technical leadership:** Reached Ethos's highest IC level and mentored engineers through transitions into engineering management. Served as the final escalation point for major production incidents across the platform.
- **Platform scaling:** Supported Ethos's growth from one core engineering group into a multi-team organization by migrating production workloads from ECS to EKS with **100% uptime**. Standardized deployment, service ownership, and observability across teams with Kubernetes and Datadog.
- **Deploy automation:** Reduced deploy time from **about 5 hours to 5 minutes** by building a GitOps pipeline with GitHub Actions, ECR, a Go deployment service, and Argo CD. Added a React admin UI that let operators map commits to releases.
- **Service architecture:** Mapped domain and data boundaries with ERDs to help decompose the core monolith and enable independent team ownership. Helped establish a microservice-first model as the platform grew to **20+ Kubernetes services**.
- **Database migration:** Improved data modeling and feature delivery by migrating MongoDB to Postgres. Enforced schemas at write time and used ACID transactions to preserve integrity across financial workflows.
- **Event platform:** Led the architecture and built a shared **event platform** adopted by **5–10 services across 10–20 topics**, handling **50K+ events per day**. Used a transactional outbox with Postgres CDC to commit state changes and events together. Added Kafka, Avro schemas, and an HTTP dispatcher so teams gained replayable, versioned events without owning broker complexity.
- Owned additional platform and data-system work across database operations, application performance, data modeling, and query optimization:

Database operations: Owned production Postgres reliability, recovery, performance, and cost using Multi-AZ RDS, point-in-time recovery, pganalyze, pg_cron, reserved instances, and reusable Terraform modules.

Frontend performance: Improved page-load speed and made frontend systems easier to extend by adding application and Nginx asset caching, reducing redirects, and standardizing CORS and cookie handling across subdomains.

Backend performance: Improved API response times with reusable Redis middleware caching and prevented stale assets by building a Kubernetes operator that invalidated the CDN when images changed.

Data modeling: Strengthened referential integrity by replacing polymorphic relationships with exclusive-arc constraints that ensured each record referenced one valid parent. Shipped the schema change with zero downtime.

Query optimization: Reduced a payments query from **4 hours to 5 seconds** by **analyzing its execution plan** and restructuring the SQL.

Curology | Fullstack Engineer 2017 - 2018

Built an in-browser editor used to create **hundreds of photos per week**, using Canvas, D3, RxJS, and mobile drag-and-drop. Built photo metadata APIs that powered product features and analytics.

hiQ Labs | Lead Frontend Engineer 2015 - 2017

Built a paginated employee directory, AWS-backed upload and download workflows, and KPI dashboards. Modernized the frontend toolchain with Webpack, Babel, and PostCSS to ship minified, gzipped production assets.