

# ANDREW S. ROSS | Senior Full-Stack Engineer — AI Systems & Platform

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## SUMMARY

Engineer who ships 0→1 products and scales them. 6+ years across TypeScript/React/Next.js and Node/Python backends with Postgres/Redis, Docker, and AWS. Built a multi-provider (xAI, OpenAI, Anthropic, Google, Meta, Vercel) AI chat surface (per-turn routing, event-driven, typed streaming, BYOK) and cut p95 “first token” ~40% with a custom WebSocket server. Led takeda.com across 70+ geos, moved Netlify→Vercel (4× faster builds), and improved page performance ~3× via image/CDN pipeline. Comfortable owning platform + product layers, partnering with design/marketing, and writing the docs others build from.

## CORE SKILLS

**Frontend:** TypeScript, React/Next.js (RSC/SSR/ISR; PPR experimental), Vite, SWR, data-viz (D3), 3D UI (three.js/R3F), Tailwindcss, native JS/CSS, accessibility (WCAG), SSR/SVG fallbacks, prefers-reduced-motion.

**Backend:** Node.js (Fastify/Express, Nest.js), GraphQL (Apollo/TypeGraphQL), REST, WebSockets/SSE, Python (FastAPI), Prisma, Drizzle, Postgres, MySQL, SQL Server, MongoDB, Redis/Elasticache, BullMQ (retries/backoff/idempotency).

**Cloud/DevOps:** AWS ECS/Fargate, ECR, RDS, S3/CloudFront, ALB, Route 53, Secrets Manager, SES; Docker; CI/CD (GitHub Actions, Vercel); Cloudflare Workers (and lots of DNS). Azure: Blob Storage, Postgres, Functions, Azure AD/Okta SSO app registrations. Heavy on Bash scripting/automation; Familiar with Terraform concepts.

**AI/Media:** OpenAI, Anthropic, Google Gemini, xAI’s Grok, Meta’s Llama, Vercel’s v0; per-turn provider routing within conversations; token/event telemetry; surface CoT; custom xAI and Vercel SSE integrations for model-level control.

## EXPERIENCE

### Creator & Lead Engineer — Slipstream (Independent Project) Jun 2025 – Present, Remote

- Built a multi-provider AI chat surface (TS/Next) with a typed, event-driven streaming layer and per-turn provider/model routing (OpenAI/Anthropic/Gemini/xAI/Llama/v0).
- Custom Node WebSocket server (Redis mTLS) with backpressure and emission cadence tuning; ~40% faster p95 input→first-token; resilient over in-flight Wi-Fi.
- End-to-end S3 + CloudFront asset pipeline: WS-evented upload lifecycle (init→upload→verify→finalize→ready), presigned PUTs, content-hashed keys; client-side metadata extractor (pure TS, isomorphic; EXIF/orientation, color profile, dimensions) for instant, correct previews—even on iOS Safari.
- Job processing for assets and background tasks (BullMQ), idempotent retries/backoff, quotas/rate-limits; admin telemetry (latency p50/p95, token usage, failure modes).
- “[Director’s Desk](#)” prototype (WIP): generate transcripts from completed “scenes”; queue with BullMQ; templates into Runway compat scene jobs; queue → Runway API → stream progress UI while renders complete in background. Use cases: historical event recreation (designate roles/personalities/lines to chosen models), creative endeavors, etc
- Polyrepo: Next.js on Vercel; persistent Node WS on AWS Fargate; FastAPI sidecar (asset gen specialist, Fargate); Prisma Postgres + mTLS Redis; Dockerized services.
- Live: <https://chat.aicoalesce.com> | Repo: <https://github.com/DopamineDriven/slipstream>

### JAMstack Development Lead (Platform/Marketing Eng) — Takeda Pharmaceuticals Apr 2022 – Sep 2024, Remote

- Partnered daily with cross-org stakeholders (R&D, HR, Legal, PR, Executive, Oncology, DE&I, PDT/BioLife). Shipped the new takeda.com across 70+ geographies; owned safe previews/rollbacks and performance budgets.
- Netlify→Vercel migration: 4× faster builds; standardized CI previews/rollbacks. Programmatically mirrored 100k+ assets via Cloudinary; ~3× page-perf via image/CDN pipeline. Proof: <https://youtu.be/M4vrwI5PDI0?t=129>

- Built 12+ internal packages (design tokens/components/data fetching) and i18n/locale routing; Azure AD SSO integrations; heavy Azure/Okta app-reg ownership.
- Stakeholder POCs: Apple Wallet employee ID (Canada IT; with Italy/Brazil leaders), XR deployments (20+ projects) with Cloudflare↔Vercel DNS orchestration (3+ domains per project).
- BioLife Donor Experience: approx. 13.3k monthly viewers per search console insights; recovered approx. 1K monthly visits via Facebook-mobile landscape edge workaround; owned GA org (~90 properties), Datadog RUM/APM/session replay, and Vercel Enterprise tasks (log drains, other integrations) via owner permissions.
- Modernized Workday-mediated Jobs site: Next.js + Sanity + Algolia; geoproximity filtering (mi/km) with smart defaults via Edge middleware; daily CRON to transform legacy Workday data (Google Places API to resolve locales, postal codes, etc) and update Sanity dataset; changes live via ISR without deploys.

**Software Engineer & HIPAA Compliance Officer — Cortina (Telederm) May 2021 – Feb 2022, Remote**

- HIPAA-compliant Node/TypeGraphQL microservices on AWS Fargate (Postgres, Redis/BullMQ); secure document workflows; analytics and A/B testing on a headless surface.

**Independent Consultant (Co-founder) — Windy City Devs LLC Mar 2020 – Apr 2021, Remote**

- Delivered Node/React/Postgres stacks on AWS with CloudFront; codified performance/reliability practices; mentored 40+ full-stack students (React/Node/GraphQL).

**SELECTED LINKS**

[chat.aicoalesce.com](https://chat.aicoalesce.com) | [github.com/DopamineDriven/slipstream](https://github.com/DopamineDriven/slipstream)

**EDUCATION**

BS — Biological Anthropology; BA — Biochemistry, University of Iowa | Professional Certificate — Full-stack Development, Northwestern University

*Role-specific versions available on request: Marketing Frontend • Low-Latency Backend • Full-Stack (People/Tools/DX).*