

José Miguel Hernandez

Staff Software Engineer | Applied AI & Agent Platforms

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SUMMARY

I build the AI tooling other engineers work on top of, and the guardrails that make it safe to run. At AdRoll, that meant agent-planned migrations across dozens of repositories, security controls and evals for our internal agent, and shared agent skills, alongside customer-facing AI features in our ad builder. I recompose what already works instead of rebuilding it, I make complex systems legible enough for people to decide with, and I own the work from prototype to production.

EXPERIENCE

AdRoll (NextRoll), San Francisco · Remote

Jun 2017 – Jul 2026

Staff Software Engineer

Hired as Senior Software Engineer; promoted to Staff.

Agent Safety and Applied AI

- Shipped PR-authoring improvements and security controls for an internal LLM agent: classified its access model as critical-tier under the lethal-trifecta model (private data, untrusted input, ability to act), added a mandatory kill switch and requester-and-rationale provenance, and enforced write-endpoint coverage in CI.
- Audited our shared agent-skills repo against the SVP of Engineering's nine AI principles, wrote its auto-invoke policy, and disabled auto-invoke on 54 skills.
- Ported a colleague's product-intelligence prototype into our internal agent: a read-only Zendesk broker and skills that support ran from Slack, then four reusable product-management skills in the shared skills repo.
- Built AI-generated copy and image-outpainting interfaces for Create Web Ads, an HTML5 ad builder. Within about six months, more than 250 advertisers were spending on ads made with the product.
- Prototyped an AI ad builder that generated a templated HTML5 ad from a customer's site data in one shot.
- Built the front end and tool integration for an internal AI media-planning assistant for sales reps preparing pitches, testing every prompt revision against sample briefs and a pass/fail checklist.
- Wrote most of Monet's SOUL.md, guardrails and rapid-prototyping skills, grounded in the design system's tokens and patterns.

Agent Platform and Developer Tooling

- Extended developer tooling into a dependency-and-ownership graph across 28 repositories, routing upgrade PRs, Jira tickets, and Slack notifications to owning teams.
- Designed the org's React 19 migration so one engineer with LLM agents could drive it: mapped the chains of dependency updates across 26 repositories on mixed React versions and adjacent libraries, planned the work over the Atlassian MCP, and dispatched it over the Buildkite MCP to CI pipelines that opened the upgrade PRs, gated by cohort with a live dashboard per cohort. Built an AI-assisted effort model that caught a 2–4 week underestimate within days; Hack Week Overall runner-up.
- Built the design system's canonical source and implementation gates so AI-assisted prototypes stayed aligned with the components downstream teams used; checked visual drift with a full-product Playwright snapshot gallery.

Technical Leadership

- Led the Creatives team's 2026 AI roadmap, translating product goals into technical specifications and effort estimates.
- Triageed all 100 unresolved Sentry issues in the ads service into six tickets in a day; diagnosed an N+1 query affecting 309 users and a label-creation race behind 11,000+ error events, then fixed three of them, including the race.
- Produced NextRoll's twice-yearly Hack Week 14 times; seven placements, four wins; mentored four interns.

Pandora, San Francisco

Dec 2015 – Mar 2017

Senior Software Engineer, Consumer Electronics

- Rebuilt Pandora's Chromecast receiver for the Premium launch, adding repeat, shuffle, and queue controls; profiled performance on first-generation hardware and architected a cross-device test environment.
- Built the Pandora-for-Uber account experience, including account connection, onboarding, age gating, and error recovery.
- Worked on integrations for LG, Samsung, Android TV, and Windows 10, plus shared client and message-bus infrastructure for Chromecast and Google Home.

Rdio, San Francisco

Jun 2014 – Dec 2015

Senior Software Engineer

- Managed Rdio's Roku partnership and built account-linking and subscription-billing flows, including an inline 30-day trial purchase.
- Built Rdio's shutdown export experience as a graceful send-off for listeners, letting them download their collections or transfer stations to Pandora, with a personalized listening-history timeline.

TastemakerX, San Francisco

Mar 2013 – Jun 2014

Senior Software Engineer

- Relaunched TastemakerX's music-discovery client as a Backbone single-page app, building activity-feed aggregation, a media-embedding engine, responsive UI, and Facebook onboarding; shipped convertmyplaylist.com, a Spotify-to-Rdio playlist converter.

Telly (formerly TwitVid), San Francisco

Dec 2011 – Sep 2012

Lead Front-End Engineer

- Led TwitVid's front-end redesign into Telly, rebuilding its PHP/Mustache application as a hybrid SPA with History.js navigation; shipped a Chrome bookmarklet, browser-side event tracking, and three-language localization.

50 Cubes, San Francisco

Jan 2010 – Oct 2011

Director of Activation

Owned platform integrations and distribution for two top-100 Facebook games, Mall World (5.6M MAU) and Fashion Designer (3.4M MAU), across every social network that would carry them.

- Owned the JavaScript/HTML platform and payment layer around both games: Facebook integration and viral flows, syndication across MySpace, Orkut, hi5, Plinga, and Viximo.
- Built a SWF-to-SVG/PNG conversion pipeline for ~14,000 Flash assets, then built JANICE, an avatar runtime for mobile browsers that consumed the converted catalogue.

AOL, San Francisco

May 2008 – Nov 2009

Senior Software Engineer

- Built admin tools, templates, and reporting for self-counting ad placements deployed across ~50 locations, including most of Bebo's front page at ~9M daily views.
- Built the admin for routing ~20 ad tags from ~10 providers, with audit logging on every change, a start/stop kill switch, and a counter on each tag to settle delivery disputes with our own numbers.

Bebo, San Francisco

Sep 2006 – May 2008

Senior Software Engineer, Ad Operations

Hired into ad operations to build sponsored profile pages; moved to engineering and promoted.

- Hand-built large-brand sponsorships, profile takeovers, and contests in HTML and Flash, including full IAB size matrices with Flash units and GIF fallbacks; homepage takeovers were worth \$10K–\$50K a day.
- Established reusable sponsorship specs and templates, moving campaigns from hand-built production to a system sales teams could run; co-architected and built the ad system's per-placement tracking and analytics counter server.

SKILLS

Applied AI · AI agents, large language models (LLMs), agentic workflows, Claude Code, Codex, MCP, tool calling, prompt engineering, evals, guardrails, provenance

Developer Tooling · codemods, migration automation, dependency and ownership graphs, CI gates, MCP servers, agent skills

Frontend and Design Systems · TypeScript, React, Next.js, Redux, design systems, component libraries, Figma, design tokens, accessibility

Backend · Python, Node.js, Flask, Django, SQLAlchemy, Postgres, SQL, OAuth, payments, billing

Infrastructure · AWS (ECS), Docker, CI/CD, Playwright, Jest, observability (Datadog, Sentry)

EDUCATION

University of California, Santa Cruz · BA, Film and Digital Media