James David Thomason

Senior Applied AI Engineer | Generative AI & Production Systems

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Applied AI engineer with 12+ years delivering software, including enterprise GenAI tooling at Moody's Ratings. Builds agent workflows, retrieval systems, model integrations, and evaluations, with public projects available for inspection.

Core expertise

AI: Agent orchestration, RAG, LangGraph, LangChain, MCP, prompt and context engineering, evaluation

Engineering: Python, Go, TypeScript, React, Next.js, FastAPI, PostgreSQL, pgvector, Redis, GraphQL

Cloud & delivery: AWS, Azure, GCP, Docker, Kubernetes, Terraform, GitHub Actions, OpenTelemetry

Additional: PyTorch, TensorFlow, NumPy, Pandas, LlamaIndex, Rust, Sentry

Professional experience

Moody's Ratings

2026

Senior Machine Learning Engineer

- Developed enterprise GenAI tooling for shared knowledge, configurable agents, and automated engineering and product workflows.
- Implemented workflow orchestration, prompt and context handling, and group-based access to shared knowledge.
- Built MCP integrations and model routing with LiteLLM and Bifrost across AWS, Azure, and GCP.

Wonder Cave

Feb 2025 - Aug 2026

Senior Full-Stack Software Engineer

- Built an agentic system that automated project-management and engineering tasks for a small team.
- Created codebase-mapping and documentation pipelines; improved performance and maintainability through targeted refactoring.

Mentra

May 2023 - Feb 2025

Senior Full-Stack Software Engineer

- Built and evaluated talent-matching models to align candidate profiles with job requirements.
- Prototyped resume ingestion and conversational onboarding to structure candidate information.
- Modernized a Next.js/React application; improved CI/CD with Vercel, Render, and GitHub Actions, and added Sentry monitoring.

Professional experience, continued

Endava North America

Senior Software Engineer — Oct 2019 - May 2023

- Built a proof of concept that helped secure a **two-year, $10M warehouse automation engagement**; provided technical direction across six workstreams and 60+ engineers.
- Developed IoT tracking and Android wearable tools that cut staging-lane waits from hours to **under 60 minutes**.
- Helped establish the North American Go practice through design guidance and mentoring; modernized services with Docker, Kubernetes, and serverless architectures.

Software Engineer — Sep 2016 - Oct 2019

- Delivered high-availability banking features across C#, Java, React, and Angular; tuned queries and automated build and deployment workflows.

AvidXchange

Oct 2015 - Sep 2016

Lead Software Development Engineer in Test

- Led reusable web/API regression automation and mentored engineers in software design, code quality, and reliable delivery.

Method

Apr 2014 - Oct 2015

Software Development Engineer in Test

- Built Selenium infrastructure integrated into CI/CD and led workshops on test architecture, object-oriented design, and clean code.

Selected projects

Jev Harness | jev-harness.dev

Built a live workspace compiling typed Choice, Score, and Noul questions into Jev requests across 11 contexts. Added server-side validation, GraphQL subscriptions, and revision handling; kept policy thresholds separate from model inference.

Evidence Workbench | github.com/no-complect/evidence-workbench

Built a Next.js/FastAPI research workspace with LangGraph, PostgreSQL/pgvector, hybrid retrieval, approval checkpoints, durable workers, and citation provenance. Added strategy comparisons and synthetic evaluations; documented scripted fixtures and optional live-model adapters separately. Production paths remain unverified.

Geometric Langlands Atlas | glc-atlas.xyz

Built an interactive mathematical reading companion with Next.js, TypeScript, Three.js, and KaTeX, combining cited concept connections, exact finite calculations, and guided visual lessons.

Professional development

DeepLearning.AI and Stanford Online | Coursera

Machine Learning Specialization · In progress

Completed course certificate: Supervised Machine Learning: Regression and Classification · May 2026