

Brian E. Kane

Senior Full-Stack Engineer | Applied AI Systems | Healthcare Technology

River Ranch, FL | Remote Only | [BrianEKane.com](https://brianekane.com) | github.com/bkane56 | linkedin.com/in/brian-kane-396a8862

CONTACT

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CORE SKILLS

Applied AI and ML

LLM applications, RAG, embeddings, vector databases, agentic workflows, MCP tooling, prompt and context engineering, AI evaluation, model orchestration, machine-learning and time-series experimentation

Frontend

React, Next.js, TypeScript, JavaScript, React Router, Redux, Tailwind CSS, responsive UI, accessibility

Backend

Java, Spring Boot, REST APIs, Python, FastAPI, Pydantic, OAuth2, Maven, JUnit, Hibernate

Cloud and DevOps

AWS, Docker, Terraform, CI/CD, Vercel, Render, Pivotal Cloud Foundry to AWS migration

TARGET ROLES

- Applied AI Engineer
- Full-Stack AI Engineer
- AI Solutions Engineer
- Healthcare AI Engineer

Professional Summary

Senior full-stack engineer with 11 years of enterprise software delivery experience building React, Java/Spring, Python/FastAPI, API, and AWS systems. Now specializing in applied AI, including RAG, agent workflows, model orchestration, machine learning, and AI evaluation. Former healthcare practitioner and clinical neurology practice leader with multi-decade experience in patient care, healthcare operations, and multidisciplinary collaboration. Best suited for teams that need a production-minded engineer to build reliable AI products across frontend, backend, cloud, and healthcare workflows.

Selected AI and Full-Stack Projects

The Hallucination Tribunal | 2026

RAG Document Assistant | Multi-Agent Verification Workflow

- Built a controlled-corpus RAG application with hybrid retrieval and a Witness, Prosecutor, and Judge workflow for claim-level verification.
- Implemented citation-aware responses, multi-format document ingestion, provider flexibility, evaluation workflows, automated testing, and cloud deployment.

Tech: Next.js, TypeScript, Python, FastAPI, ChromaDB, BM25, OpenAI, optional Ollama, Vercel, Render | [GitHub](https://github.com)

MediNotes Pro | 2026

Healthcare-Focused AI Documentation Assistant

- Built a healthcare-oriented AI assistant that transforms synthetic consultation notes into structured visit summaries, clinician next steps, and patient-friendly communication.
- Designed private containerized Ollama inference, authentication, SSE streaming, and explicit PHI/PII-conscious demo boundaries using synthetic data only.

Tech: Next.js, React, TypeScript, Python, FastAPI, Docker, Ollama, Clerk, SSE, Vercel, Render | [GitHub](https://github.com)

AI Digital Twin | 2025 - Present

Portfolio AI Assistant | Full-Stack AWS Application

- Built a live conversational AI assistant grounded in professional background, resume content, project summaries, and curated context.
- Implemented a typed FastAPI backend, AWS Bedrock and Amazon Nova inference, S3 session memory, Terraform infrastructure, and GitHub Actions deployment using OIDC.

Tech: Next.js, React, TypeScript, Python, FastAPI, AWS Bedrock, Amazon Nova, S3, CloudFront, Terraform, GitHub Actions | [GitHub](https://github.com)

Professional Experience

Express Scripts / The Cigna Group / Evernorth | October 2015 - May 2026

Software Advisor | Senior Software Analyst | Software Analyst | Intern

- Selected as one of eight engineers chosen to help lead modernization of the Express Scripts consumer-facing web platform into a React and Java/Spring architecture.
- Helped improve page-load performance by approximately 20%, reduce errors by 25%, increase digital usage by 30-40%, and contribute to a 30% reduction in phone-based orders.
- Built and enhanced customer-facing features for Order Status, Automatic Refill, Delivery Date Changes, and Over-the-Counter Medications.
- Worked across frontend, backend, API, and integration layers using React, React Router, Redux, JavaScript, TypeScript, Java, Spring Boot, REST APIs, Maven, JUnit, OAuth2, and Hibernate.

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EDUCATION

Diplomate, American Board of Chiropractic Neurology
Doctor of Chiropractic, Logan University
B.S. Human Anatomy and B.S. Human Biology, Logan University
B.S. Zoology, Physics and Chemistry minors, Eastern Illinois University
Additional graduate study in recombinant genetics

AI DEVELOPMENT

Agentic AI engineering, LLM engineering, RAG, QLoRA, production AI systems, n8n and voice-agent workflows, and AI-assisted software development.

DISTINCTIVE VALUE

- 11 years of enterprise software delivery
- Multi-decade clinical healthcare background
- Mentored 10-15 engineers
- Production engineering discipline applied to AI systems
- Full-stack ownership across UI, APIs, cloud, and AI workflows

ADDITIONAL PROJECTS

InvestAI

AI-assisted paper-trading platform with deterministic risk controls, portfolio-aware recommendations, and an auditable decision ledger.

RAGOps Platform

RAG lifecycle platform for ingestion, retrieval comparison, citation validation, pgvector, and evaluation.

National Park Trip Planner

CrewAI role-based multi-agent orchestration with safe demo behavior and streamed workflow output.

Insurellm RAG Explorer

LangChain-based RAG explorer for comparing embeddings and visualizing vector-store behavior.

ENGINEERING STYLE

Practical, direct, collaborative, and focused on systems that are usable, testable, maintainable, and honest about their limitations.

Professional Experience, Continued

Express Scripts / The Cigna Group / Evernorth

- Contributed to application and infrastructure migration from Pivotal Cloud Foundry to AWS, strengthening cloud deployment, scalability, and production operations experience.
- Helped establish frontend component patterns, implementation standards, and accessible user experiences meeting A11y testing requirements.
- Trained and mentored 10-15 junior and mid-level engineers in React and Java-based full-stack development.
- Partnered daily with business stakeholders, translated requirements into production-ready software, and contributed to architecture decisions in a large-scale healthcare environment.

Independent Applied AI Engineering

2025 - Present

- Designed and deployed full-stack AI applications using Next.js, React, Python, FastAPI, AWS Bedrock, Ollama, OpenAI models, vector databases, Docker, Terraform, and CI/CD.
- Built RAG systems with hybrid retrieval, evidence citations, claim-level validation, document ingestion, and evaluation-oriented iteration.
- Implemented deterministic validation, risk, privacy, and cost controls around probabilistic model output and agent workflows.
- Developed machine-learning and time-series forecasting experiments using historical market data, with the forecasting project being prepared for public portfolio release.
- Used CrewAI, MCP-based tooling, multi-step orchestration, automated testing, and deployment-minded engineering practices.

Prior Healthcare Leadership

Clinical Practice / Chiropractic Neurology | 1984 - 2014 Chiropractic Physician | Clinical Neurology Practice Leader | Solo Practitioner

- Practiced in solo and large multidisciplinary clinical environments, including leadership in clinical neurology-focused patient-care workflows.
- Built deep experience in clinical reasoning, patient communication, documentation, healthcare operations, and interdisciplinary collaboration.
- Developed early hands-on technical experience by networking clinic systems and supporting operational technology needs before transitioning fully into software engineering.
- Brings healthcare workflow understanding and domain credibility to clinical documentation, patient-facing systems, insurance, pharmacy, and healthtech software.

Why This Background Matters

I bring a practical combination of production software engineering, healthcare workflow knowledge, clinical reasoning, and applied AI development. That mix is especially useful for teams building AI-enabled software where correctness, usability, privacy, and trust matter.