

Tobi Akinwale

AI/ML Engineer | Legal Technology & Generative AI | 240-615-6420 | akinwalet2@gmail.com | Public Trust

Professional Summary

AI/ML engineer with experience building secure generative AI, retrieval-augmented generation (RAG), agentic workflows, APIs, and data platforms for legal, government, and regulated environments. Skilled at partnering with attorneys and business stakeholders to translate complex legal and operational needs into production-ready AI tools, while emphasizing confidentiality, governance, accuracy, validation, and measurable workflow improvement.

Experience

Akin Gump - Remote | AI/ML Engineer

Aug 2025-Present

- Designed and delivered secure AI applications, including an internal firm assistant, improving attorney and staff efficiency and client support by approximately 30%.
- Partnered with legal professionals and business-services stakeholders to identify high-value use cases and translate legal workflows into practical AI-enabled solutions.
- Built generative AI and RAG workflows in Microsoft Azure for legal research, document search, summarization, drafting support, and knowledge retrieval across firm content.
- Developed and refined prompts, guardrails, source-grounding, and human-review workflows to improve answer quality and reduce hallucination risk in high-stakes legal use cases.
- Deployed and managed AI solutions through Azure AI Foundry, supporting evaluation, pilot testing, release readiness, documentation, and user adoption while protecting client confidentiality and legal compliance.
- Built and configured Microsoft Copilot Studio solutions to automate legal and business workflows and provide conversational access to approved firm knowledge and data sources.

Booz Allen Hamilton - McLean, VA | Staff AI/ML Engineer

Apr 2025-Aug 2025

- Built RESTful APIs with FastAPI to support LLM-based question answering, semantic search, embeddings, and downstream application integrations.
- Integrated AWS GovCloud services, SDKs, and live data feeds for secure government use cases requiring controlled access and reliable deployment.
- Engineered Pandas-based data pipelines for large-scale analytics, data preparation, and machine learning workflows.
- Collaborated with engineering and mission stakeholders to convert business requirements into secure, scalable AI services and technical documentation.

Guidehouse - Tysons, VA | AI Engineer II

Mar 2024-Apr 2025

- Led development of an LLM-powered legislative analysis tool that increased review efficiency by 45%; presented the solution and business impact to the client's CFO.
- Developed a RAG-based government opportunity search tool and Dockerized the application for portable, scalable deployment.
- Automated Congressional Budget Justifications with AI agents, reducing preparation time by 60% while supporting structured review and repeatable outputs.
- Managed Azure MySQL data storage and retrieval workflows for analytics, semantic search, and application integration.
- Worked with subject-matter experts to validate model outputs, refine prompts, document workflows, and improve usability for nontechnical users.

National Institutes of Health - Bethesda, MD | Data Scientist

Dec 2021-Dec 2023

- Applied Python, SQL, R, statistical analysis, and predictive modeling to complex biomedical datasets in a highly regulated research environment.
- Prepared, cleaned, and analyzed structured data; communicated findings to technical and nontechnical stakeholders through clear documentation and presentations.
- Contributed to reproducible analytical workflows and research outputs, including first-author publication work.

Technical Skills

Languages: Python, SQL, R

Generative AI & ML: LLMs, RAG, AI agents, NLP, embeddings, semantic search, prompt engineering, model evaluation, predictive modeling

Application Development: FastAPI, REST APIs, workflow automation, data pipelines, production integration

Cloud & DevOps: Microsoft Azure, Azure AI Foundry, Microsoft Copilot Studio, AWS GovCloud, Docker, Azure MySQL

Legal AI & Governance: Legal research and document workflows, knowledge retrieval, source grounding, human-in-the-loop review, confidentiality, data security, compliance, stakeholder training and documentation

Education

Johns Hopkins University - M.S. Data Science

Towson University - B.S. Bioinformatics

Publication

First Author - Neuron