

JAMES MENDENHALL

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PROFESSIONAL SUMMARY

Data Engineer & Business Intelligence Analyst with 12+ years of experience building automation, reconciliation, and compliance systems for enterprise and government clients. Proficient in Python, Databricks, and ACL automation. Currently developing AI systems through implementation of RAG pipelines, autonomous agents, and vector database architectures.

CERTIFICATIONS

Microsoft Certified: Azure AI Engineer Associate (AI-102)

PROFESSIONAL EXPERIENCE

Senior Technical Analyst | eimagine (DFAS / Deloitte)

Feb 2018 – Present | Indianapolis, IN

- Engineered ACL automation shell used enterprise-wide for reconciliation, reducing build time by 90% and enabling the team to handle 3x project volume.
- Designed Databricks ETL pipelines to cleanse, merge, and validate multi-million-row datasets for audit readiness.
- Built custom Excel/VBA tools for data lineage visualization, error tracking, and variance analysis adopted across teams; trained analysts on advanced workflows.
- Acted as primary technical liaison for data issues; authored detailed technical documentation and led onboarding workshops for new developers.
- Supported automation of case management data visualization using Python, ACL, and Databricks for improved compliance reporting.
- Recognized repeatedly for exceptional client service and technical expertise; contributed to contract growth by 6+ additional resources.

Anti-Money Laundering Analyst | American Express

May 2016 – Jul 2017 | Phoenix, AZ

- Investigated AML and suspicious activity alerts across jurisdictions; drafted detailed reports for FinCEN submissions.
- Coordinated with compliance, legal, and international teams to resolve complex cases under tight deadlines.

Senior Compliance Analyst | Accenture (Facebook)

Jan 2015 – Apr 2016 | Austin, TX

- Reviewed legal and content-abuse requests; liaised with federal, state, and international law enforcement.
- Standardized workflows and documentation for high-sensitivity compliance cases.

Cryptologic Technician | United States Navy

Feb 2011 – Sep 2013 | Pensacola, FL

- Maintained and calibrated cryptologic equipment, ensuring continuous operational readiness and signal integrity.

AI INTEGRATION & DEVELOPMENT (August 2024 – Present)

Live projects showcased at jamesmendenhall.dev

Personal AI Assistant — Production RAG with Langfuse Observability

- Built end-to-end RAG pipeline in Python using OpenAI API, Supabase (PostgreSQL + pgvector), and Langfuse for production observability and quality debugging.
- Implemented semantic search with vector embeddings, hybrid (keyword + semantic) filtering, token streaming, and Flask API deployment.

Markets Report AI Agent — Autonomous Daily Analysis

- Built fully autonomous AI agent generating daily finance and crypto market reports via GitHub Actions.
- Orchestrates Yahoo Finance, CoinGecko, Etherscan, and NewsAPI data sources with OpenAI-driven HTML report generation.

Sneks — NFT Game with Blockchain Integration

- Developed interactive P5.js arcade game with Ethereum wallet verification via OpenSea API; deployed on Base L2 with gas-free gameplay.
- Built Node.js backend with PostgreSQL for score validation and leaderboard management with recurring prize competitions.
- Automated daily Twitter posts via Claude API and GitHub Actions using AI-generated captions from NFT metadata.

TECHNICAL SKILLS

Data Engineering: Databricks, PySpark, ACL, SQL, Excel (VBA/macros), ETL Pipelines

Automation & Scripting: Python, GitHub Actions, Web APIs

AI Integration: RAG Systems, Vector Databases, OpenAI API, Claude API, Azure Foundry, Embeddings, Function Calling, Langfuse

Tools: GitHub, PostgreSQL, Flask, Supabase, Render, Node.js

EDUCATION

Bachelor of Science in International Studies — Indiana University, Bloomington, IN

Certificate, Full Stack Web Development — Galvanize (6-Month Immersive), Denver, CO