

Nathan West

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OBJECTIVE

Results-driven Machine Learning Engineer with a passion for building production-grade AI systems at scale. Experienced in designing agentic LLM workflows, graph-based ML pipelines, and serverless cloud architectures that process millions of events daily. Seeking to leverage deep expertise in MLOps, generative AI, and distributed systems to drive impactful solutions in a challenging, growth-oriented role.

EDUCATION

B.S. Computer Science, Virginia Commonwealth University, Richmond, VA — May 2019
Minor in Mathematics

PROFESSIONAL EXPERIENCE

Applied ML Associate Sr February 2023 – Present

JPMorgan Chase & Co, Asset & Wealth Management — Global Private Bank AI/ML Team, Jersey City, NJ

- Designed and implemented an Agentic LLM system to automatically label and categorize electronic communications for Legal E-Discovery, reducing manual review overhead (2026).
- Led the full technical lifecycle of a Knowledge Graph ML pipeline using TigerGraph DB — from infrastructure setup through model deployment (2025):
 - Provisioned all connectivity infrastructure: private link, EC2 cluster, NLB, and mutual-TLS auth certificates.
 - Built bulk data ingestion pipeline for daily feature extraction using AWS EventBridge, Glue, Step Functions, and EKS.
 - Deployed a Graph-based LSTM model with multi-head attention to AWS EKS for production inference.
 - Served as primary communicator and technical lead for the E-Comm Communication Knowledge Graph initiative.
- Architected and re-engineered a serverless ML inference platform processing 3–4 million messages per day across 15 WM Supervision policies (2024):
 - Reduced batch processing time by 70% and cut compute costs significantly through a serverless-first AWS design (EventBridge, ECS, RDS, S3, Lambda, EKS).
 - Built Streamlit-based monitoring dashboards to support batch operations and ad-hoc analysis.
- Developed a Retrieval-Augmented Generation (RAG) Review Assistant chatbot with MongoDB as the vector store, enabling supervisors to efficiently triage and act on E-Comm review violations.

- Created shared APIs for common vector store operations against MongoDB and OpenSearch, and designed document chunking and embedding pipelines for the WM E-Comm platform.
 - Established the team's standard MLOps template for production model deployment, covering containerization, CI/CD, and API standards (FastAPI, Pydantic, Docker, Kubernetes, Jenkins).
 - Conducted technical candidate interviews to support expansion of the Global Private Bank AI/ML Team.
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Associate Software Engineer June 2020 – January 2023

Carnegie Mellon University, Software Engineering Institute (SEI), Pittsburgh, PA

- Lead Engineer for the A3ITE project — standardized assembly, deployment, monitoring, and adaptation of data processing pipelines using available information services.

Tools: Python, JavaScript, VueJS, Docker, Flask, Apache Kafka, Apache NiFi

- Engineer for the AI End-to-End (AIE) platform, enabling generalized secure ML model deployment on the Secured Unclassified Network (SUNet).

Tools: Python, Flask, Jinja2, Docker, Apache NiFi, Neo4j, Prometheus, Grafana

- Lab Administrator for the SSD Concept Lab — managed users, machines, equipment inventory, and budget for a multi-subnet research network.

Data Engineer August 2019 – June 2020

Carnegie Mellon University, Software Engineering Institute (SEI), Pittsburgh, PA

- Built an ML data pipeline to collect and analyze tweets, studying the influence of social media spambots on trending topic sentiment.
 - Provided technical guidance to research customers across multiple projects.
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TECHNICAL SKILLS

Programming Languages: Python, JavaScript, SQL, Java, C++, Terraform

AI / ML: LLMs, NLP, ML, Agentic Systems, RAG, MLOps, LangChain

Cloud & Infrastructure: AWS (EKS, ECS, Lambda, EventBridge, Glue, Step Functions, S3, RDS, SNS, SQS), Docker, Kubernetes

Data & Databases: MongoDB, OpenSearch, TigerGraph DB, Neo4j, Apache Kafka, ETL / Big Data

Software & Tools: FastAPI, Pydantic, Flask, Streamlit, Git, Prometheus, Grafana, System/API Design

Operating Systems: Linux/Ubuntu, macOS, Windows

AWARDS & CERTIFICATIONS

DoD Top Secret/SCI clearance (all 4 tickets). Issued 2020.

SEI Software Architecture Professional Certificate. Issued June 2022.

AWS Cloud Practitioner Certificate. Issued 2023.