JEFFREY TAYLOR

AI & DevOps Engineer

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Location: Open to Relocation
Clearance: Active DoD Secret

CERTIFICATIONS

- AWS Certified AI Practitioner
- Microsoft Certified: Azure AI Engineer
- Udacity AI Programming with Python
- Coursera Deep Learning Specialization
- Udemy Generative AI Agent Development

KEY SKILLS

- **Programming**: Python, Java
- **Infrastructure & DevOps**: Kubernetes (K3s, OpenShift), Docker, Helm, Argo Workflows, Argo CD, Jenkins/GitHub Actions, Ansible, Terraform
- **MLOps**: MLflow, Seldon Core, KServe, MinIO, Harbor, Prometheus/Grafana, GitOps, OpenTelemetry
- **Cloud & Platforms**: AWS, Azure, GCP (foundational), MetalLB
- **Data & AI**: PyTorch, TensorFlow, LangChain/LangGraph, FastAPI, Streamlit, PostgreSQL
- **Security & Compliance**: DevSecOps, SBOMs, TLS, Air Gapped Deployments

PROFESSIONAL SUMMARY

Results-driven AI & DevOps Engineer with hands-on expertise in MLOps. Proven experience building end-to-end ML pipelines, deploying full-stack ML platforms with MLflow, MinIO, Argo Workflows, and Kubernetes using Ansible. Strong background in real-time systems, DevSecOps, and infrastructure automation. Passionate about reproducibility, observability, and scalable model serving in air-gapped and cloud-native environments. Adept at leading cross-functional teams in agile environments, leveraging microservices architecture, REST APIs, and gRPC to deliver real-time solutions, as demonstrated in the US Air Force MEDUSA system and DoD's MARS AI-assisted database. Proven technical leader with a track record of mentoring engineers, optimizing system performance, and driving innovation in fast-paced, hyper-growth settings.

PROFESSIONAL EXPERIENCE

Self Employed MLOps Researcher & Consultant (2/2023 – Present)

- Design and operate a 5 node K3s homelab that prototypes enterprise MLOps patterns (centralized scheduler, scoped operator, A/B testing).
- Open sourced k3s homelab, ml platform, and financial mlops pytorch repositories, demonstrating automated pipelines with MLflow, Argo Workflows, Seldon Core v2, and Harbor.
- Contributed bug fix & feature PR #6582 to Seldon Core v2, improving model scheduling resiliency across namespaces.
- Published 15+ Medium articles and launched personal tech site jtayl222.github.io to document best practices.

Principal Software Engineer, Leidos (1/2023 – 1/2025)

- Enhanced the MEDUSA command-and-control system, a Java-based microservices architecture built with Spring Boot and gRPC, enabling real-time data processing and integrating sensor data with actionable user interfaces for U.S. Air Force drone threat mitigation.
- Collaborated on replacing a JavaFX GUI with a REST API built on TypeScript and Node.js, supporting the evolution of a real-time command-and-control system.
- Architected and optimized Gradle-based build scripts and Jenkins CI/CD pipelines, leveraging Docker on AWS to ensure resilient, scalable deployments in an air-gapped environment; reduced build failures by refining automation scripts.
- Implemented infrastructure as code and automated tasks with Bash and Python scripts, streamlining log analysis and improving operational efficiency for a distributed, high-availability system.

EDUCATION

Carnegie Mellon University
B.S. Applied Math
(Computer Science Option)

• Research machine learning capabilities, developing a Bayesian network classification system for RADAR signal data, enhancing threat identification accuracy.
• Mentored team members in test-driven development and DevOps best practices within an Agile (SAFe) framework, fostering iterative delivery and elevating code quality through peer reviews.
• To enable communication with sensors and emitters, used JAXB to marshal Java objects into XML and unmarshal XML into Java objects.
• Used tools including OpenTelemetry, PostgreSQL, SQLite, JPA and SQL instrument and monitor the application.

Senior Consultant, Red Hat's Intelligent Application Practice (8/2018 – 1/2023)

• Delivered expert-level DevOps and application development solutions as an embedded consultant at customer sites (e.g., Peraton, Citibank, Verizon), with a focus on Java-based microservices and Red Hat OpenShift Kubernetes clusters in 100% Linux environments.
• Developed and deployed an AI-assisted expert system for the MARS project (DoD) at Peraton using Java and DRL rules, enhancing data ingestion and transaction analysis within a secure, cloud-native architecture.
• Designed and implemented CI/CD pipelines using Git, Maven, and OpenShift, automating scalable microservice deployments and crafting Kubernetes YAML configurations for mission-critical applications.
• Created Python and bash scripts to streamline workflows, analyze logs, and optimize system performance, improving operational efficiency across distributed systems.
• Acted as onsite OpenShift technical lead, troubleshooting cluster issues, advising on system design, and mentoring teams of up to four engineers on automation best practices within agile frameworks.
• Leveraged Red Hat Process Automation Manager and Decision Manager to build robust expert systems, ensuring high reliability and customer satisfaction for DoD, banking, and telecom clients.

Principal Software Engineer, Oracle Corporation (1/2010 – 9/2017)

• Researched big data solutions on SPARC, including Oracle Big Data SQL and Hadoop clusters.
• Created demos for Oracle R Enterprise integration with Hadoop and tuned Oracle Financial Services Analytical Applications.
• Provided performance consulting for third-party software vendors, e.g., IBM WebSphere on SPARC servers.

Staff Engineer, Sun Microsystems, Inc. (12/2001 – 1/2010)

• Acted as a Solaris server/storage consultant to ISVs, focusing on performance optimization.
• Ported enterprise C, C++, and Java applications to SPARC, pinpointing and resolving bottlenecks.
• Specialist in multithreading and GUIs for mechanical engineering applications implemented using XWindows and OpenGL.
• Advised on best practices for large-scale deployments and recommended system-level architectures.