

Steven Nix

Machine Learning Engineer

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Professional Summary

- Experienced Machine Learning Engineer with expertise in embedded AI systems, computer vision, and model optimization.
- 7+ years of professional experience in AI/ML, software engineering, and defense-related R&D projects.
- Skilled in developing containerized inference services, synthetic data pipelines, and custom dataset formats.
- Proven ability to deliver reliable and efficient AI solutions for defense and enterprise applications.

Work Experience

Dec 2019 – **Machine Learning Engineer, QinetiQ US**, Lorton, VA

- Present
- **Edge-Deployed AI Systems:** Researched and engineered a near real-time AI services on NVIDIA Jetson AGX/Orin hardware and FLIR sensors by combining gRPC-based inference with streaming pipelines. Built containerized services with Docker, optimized inference using TensorRT for GPU acceleration, and integrated customer-provided inference containers into the streaming framework for seamless, low-latency deployment.
 - **Synthetic Data for AI/ML:** Designed and implemented experiments on Faster R-CNN (ResNet101 FPN) models in PyTorch, systematically benchmarking synthetic vs. real data mixtures to advance ML robustness for DoD use cases.
 - **Common Data Format (CDF) Toolset:** Developed a standardized dataset framework (Python + HDF5) to support reproducible ML research and cross-organization collaboration. Built libraries and a lightweight scripting system (CDFBS) for automated batch conversions, plus GUI and headless conversion tools.

Apr 2018 – **Software Engineer, MTEQ**, Lorton, VA

- Dec 2019
- **Test, Measurement, and Diagnostic Equipment (TMDE) Automated Testing Suite:** Developed software for a configurable test table integrating multiple sensor test devices and camera systems. Designed a plugin-based framework allowing new hardware components to be added with minimal code changes. Implemented Python-driven automation to control equipment setup, test sequencing, and provide step-by-step operator instructions.
 - **Integrated Sensor Architecture (ISA):** Supported the ongoing development of the Army ISA compliance testing tool, responsible for validating device compliance with ISA protocols and standards.

Apr 2007 – **25B IT Specialist, US Army**

- Apr 2017
- Provided network/system administration and end-user support.
 - Configured and maintained Cisco equipment and Command Post Node (CPN) stacks.
 - Served as network administrator in Kirkuk, Iraq (FOB Warrior), ensuring secure and reliable operations.

Education

2017 **BS in Computer Science, Clemson University**, Clemson, SC

Awards

Army Medal of Commendation

Army Medal of Achievement

Skills

Programming	Python, C++
ML Tooling	PyTorch, TensorFlow, ONNX, CUDA, TensorRT
Evaluation	Experiment design; precision/recall, mAP, z-score
Optimization	ML pipeline optimization; GPU/TensorRT
DevOps	Docker, Git, Atlassian Suite, GitLab CI/CD
Streaming	gRPC, GStreamer