Matthew E. Struble

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Skills

Languages: Python, C++, C, SQL, Java, Bash, LaTex, Lua, Nix.
ML & AI Frameworks: LLMs, PyTorch, TensorFlow, Keras, DSPy, LangChain, LangGraph, RAG, OpenCV
MLOps Tools: Databricks, MLFlow, AWS, Kubernetes, Terraform, Docker, Jenkins, Airflow, Kubeflow, Git.

Work Experience

Principal Machine Learning Engineer - AI / ML **Nike**
Jan. 2025 - Present Boston, MA

- Built monitoring, debugging, and developer tools for AI pipelines, cutting failures across development, training, and production by 70%.
- Led training, fine-tuning, and serving pipelines for 4+ state-of-the-art models including SAM2, GroundingDino, and CLIP, enabling faster model iteration.
- Created new model pipelines and terraform templates, reducing time-to-production for novel GenAI models.
- Directed incident management, ensuring production model reliability and meeting uptime and accuracy SLAs.
- Mentored teams, led Nike AI Community of Practice, and authored MLE/SWE best practice documentation, increasing engineering standardization and reducing onboarding time.

Lead Machine Learning Engineer - AI / ML **Nike**
Feb. 2021 - Dec 2024 Boston, MA

- Optimized PySpark training and inference pipelines, reducing runtime by 70% and improving model accuracy by 30%.
- Deployed real-time, low-latency, ML/GenAI pipelines with multi-cluster scaling.
- Developed a standardized Python AWS/logging package, improving workflow efficiency and reducing production failures by 90%.
- Defined evaluation standards and monitoring best practices including canary and smoke tests for GenAI models, improving reliability and quality.
- Drove research-to-engineering workflow, accelerating AI deployment and stable production rollout.
- Optimized agent-based model workflows to enable scalable, low-latency inference pipelines.

Senior Software Engineer **DoD Contractor**
Jun. 2015 - Jun. 2020 Boston, MA

- Developed ML-based analytics tools with machine learning algorithms to assist engineers with hardware analysis.
- Processed system, sensor, and real time flight data in order to improve Guidance Navigation & Control algorithms.
- Implemented Signal processing algorithms, and time critical control functions, involved in direct control of sensor systems.
- Processed data in real time for GNC Algorithms and post-test analysis.

AI/ML Personal Projects

- **Deep Learning Photo Aesthetics:** Researched modern classification models, and developed supporting tools, in order to create a novel deep learning model to classify photo aesthetics.
- **Heineken AR Cheers Campaign:** Created an objective detection model on AWS for an adaptive AR experience.
- **Analyzing Climate Change Stance Through Twitter Data:** Tested multiple NLP algorithms like bag of words, ensemble, and BERT, in an attempt to understand - and visualize - Americans' views of climate change over time.

Education

Georgia Institute of Technology | *Masters* in Computer Science | Machine Learning, Computational Perception
Champlain College | *Bachelor of Science,* Game Programming | *Minor:* Mathematics