Ian Tai Ahn

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PROFESSIONAL SUMMARY

Applied Machine Learning Engineer with 2.5 years of experience supporting large scale defense programs at Hill Air Force Base, including work with Lockheed Martin and Pratt & Whitney. Strong academic background in machine learning, statistical modeling, and end-to-end ML pipelines, complemented by hands on experience deploying large scale, cloud-native systems. Holds an active Secret security clearance, an M.S. in Data Science, and a B.S. in Computer Science.

EXPERIENCE

Software Engineer – Full Stack / DevOps / Systems Testing

Hill Air Force Base — August 2023—Present, Hill AFB, UT

Lockheed Martin

- Designed and operated a globally deployed Kubernetes service mesh using Istio, supporting distributed microservices at scale
- Automated policy enforcement and configuration using Helm, Kyverno, and Ansible, improving reliability and deployment consistency
- Integrated testing and CI workflows to ensure >80% system test coverage across services

Pratt & Whitney

- Developed and maintained automated system tests using Robot Framework, validating complex, integrated systems
- Improved defect detection and system reliability through comprehensive test coverage and structured test design

TECHNICAL SKILLS

Languages: Python, R, JavaScript, SQL
Machine Learning & Stats: PyTorch, TensorFlow, scikit-learn, traditional ML algorithms, 2SLS / IV regression, statistical modeling
Data: pandas, NumPy, data cleaning, feature engineering, dataset preparation
LLMs / RAG: Embeddings, vector databases, end-to-end RAG pipelines
Frontend: React (primary), Django
DevOps / Cloud: Kubernetes, Docker, Helm, Istio, Ansible, Kyverno, AWS
Testing: Robot Framework, system & integration testing

PROJECT

RAG Pipeline – GitHub: github.com/IanTaiAhn/rag/

- Built an end-to-end RAG pipeline covering ingestion, preprocessing, chunking, embedding, vector storage, and retrieval.
- Implemented PDF/TXT ingestion with automated extraction and optimized chunking for higher-quality embeddings.
- Designed a multi-index FAISS system with full CRUD support and explicit index selection for isolated retrieval.
- Developed a React interface for uploading documents, triggering index builds, and managing ingestion workflows.
- Added frontend CRUD for uploaded documents and indexes with real-time state synchronization and UI safeguards.
- Created a clean, user-friendly workflow with status messaging, conditional UI states, and seamless backend integration.

EDUCATION

Master of Science, Data Science

Weber State University

Bachelor of Science, Computer Science

Weber State University

Graduate Certificate, Computational Data Science and Machine Learning

Weber State University

RESEARCH & APPLIED STATISTICS

- Designed strong instrumental variables for 2SLS regression, achieving high F-statistics and statistically robust causal estimates
- Extensive academic experience applying traditional ML and econometric methods to real-world datasets using Python and R