Tyler Ganter

SUMMARY

Senior AI engineer with 8+ years building production ML systems. Currently leading development of the GenAI platform for a national lab.

EXPERIENCE

AI Engineer — Sandia National Lab

December 2023 - PRESENT | Albuquerque, NM

- ⇒ Founded the ATLAS Team delivering <u>the</u> production AI solutions and infrastructure across Sandia's mission areas. We currently support 1000+ end users, 300+ developers and 70+ unique projects.
- \Rightarrow Received ERA (see recognitions), now presenting AI strategy to laboratory directors due to accomplishments with ATLAS.
- \Rightarrow Delivered LLM app on secure network in just 5 months now actively supporting the AI national security memorandum.
- \Rightarrow Architected modular GenAI applications and integrated vector search with bespoke access control logic.
- ⇒ Top-3 InnerSource contributor across entire lab (>14K).

Machine Learning Engineer — Sandia National Lab September 2020 - December 2023 | Albuquerque, NM

- \Rightarrow Led development of document classification system, reducing review effort by 80% in secure environments. Engineered deployment processes for secure offline ML systems.
- ⇒ Conducted ML uncertainty quantification (UQ) research, developing novel framework and STUQO library for applied UQ.
- \Rightarrow Designed production ML curriculum for 75+ summer interns across three cohorts and led AI training program for lab personnel. Championed MLOps best practices as product ambassador for Weights & Biases.

Lead Instructor - 2U, Inc.

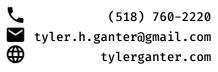
November 2021 - March 2022 | Remote

⇒ Data Analytics and Visualization Bootcamp

Machine Learning Engineer - Voxel51

January 2019 - August 2020 | Ann Arbor, MI

- \Rightarrow Spearheaded design and development of a NoSQL-backed Python package for efficient exploration and management of large-scale ML datasets. I remain a top-5 contributor after 5 years of inactivity.
- \Rightarrow Led team fine-tuning and productionizing automotive vision models. Achieved state-of-the-art performance: 95% F1-Score.
- \Rightarrow Contributed to full-stack development of an interactive data analysis web application.



EDUCATION

M.S. Electrical and Computer Engineering

University of Washington 2014 - 2016 | Seattle, WA

GPA: 3.7/4.0

B.S. Electrical Engineering

University at Buffalo 2009-2013|Buffalo,NY

GPA: 3.9/4.0

SKILLS

Machine Learning
Agile Project Management
MLOps Git FastAPI
Computer Vision
Python Docker
Transformers
Large Language Models
RAG Vector Databases
Government Advisory
LangChain Al Consulting
Uncertainty Quantification

RECOGNITIONS

Employee Recognition Award

Individual Technical Excellence (2024)

For technical leadership role in developing cutting edge generative AI tools.

Awarded to <0.1% of entire lab.

Employee Recognition Award

Team Excellence (2024)

EXPERIENCE — CONT'D

Computer Research Engineer — Sandia National Lab June 2016 - June 2017 | Albuquerque, NM

- \Rightarrow Developed a novel approach to seismic event detection which nearly tripled true positive:false alarm ratio.
- \Rightarrow Developed seismic signal classification system using statistical signal processing and machine learning approaches.

PUBLICATIONS

Improving and Assessing the Quality of Uncertainty Quantification in Deep Learning

Adams et al., OSTI 2023

- \Rightarrow Developed novel Bayesian uncertainty framework for ML classification.
- \Rightarrow Created STUQO toolkit implementing systematic evaluation procedures and metrics. Motivated as pragmatic solution to challenges faced in past ML projects: CT scan segmentation and radioisotope classification.

Alternative Null Hypothesis Correlation: A New Approach to Automatic Seismic Event Detection Ganter et al., BSSA 2018

 \Rightarrow This novel method creatively applies supervised learning to traditional techniques for dramatically improved results.

CERTIFICATIONS

Deep Learning
Machine Learning in Production
IBM Scalable Data Science
Google Cloud Platform
Google Project Management

LANGUAGES

English - Native
Italian - Proficient

VOLUNTEERING

Animal Human NM Dog Walker

PASSIONS

Climbing Travel Music Mindfulness