# TYLER GANTER

# Senior Al Engineer | Software Engineer | Python

#### **SUMMARY**

Technical lead delivering the GenAl platform for a national laboratory with a track record of accelerating Al adoption across federal agencies.

Driven by a passion for AI and 10+ years experience in machine learning and software engineering, I thrive in bridging cutting-edge AI capabilities with production-ready solutions.

#### **EXPERIENCE**

#### Senior AI Engineer

#### **Sandia National Laboratories**

### 12/2023 - Present ♀ Albuquerque, NM

- Founded the ATLAS Team delivering on-prem LLM+RAG application and GenAl API for critical mission areas. Now serving 1000+ end users, 300+ developers, and 70+ projects.
- Pioneered a cross-organizational funding model that maximizes impact across national labs.
- Delivered trailblazing classified LLM application in 5 months, accelerating mission-critical initiatives—such as a DOE-DOC Al national security memorandum pilot delivered in just three weeks.
- Showcased advanced AI/LLM capabilities to high-profile government decision-makers such as DOE-IN Director, DOT&E, 50+ NNSA officials, and 800+ Sandians—influencing US national AI strategy and securing funding for 20+ projects.
- · Wrote RAG backend with bespoke access control integrations; containerized Al microservices; extended OpenAl client API for custom endpoints—all built with rigorous security and governance for on-prem support.
- Architected ATLAS Search broker designed to intuitively support advanced RAG techniques (multiple embeddings, query expansion, hybrid search).
- **Top-3 InnerSource contributor** across entire lab (>14K staff).
- "it's outstanding!" | "as good as could be" | "I use it for all my projects"

#### Senior Machine Learning Engineer

#### **Sandia National Laboratories**

- · 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 Python library for applied UQ.
- Designed production ML curriculum for 75+ summer interns across three cohorts and led Al training program for lab personnel. Championed MLOps best practices as product ambassador for Weights & Biases.

#### Lead Instructor - Data Analytics Bootcamp

# Software Engineer | Machine Learning Engineer

#### Voxel51

**=** 01/2019 - 08/2020 Ann Arbor, MI

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

#### RECOGNITIONS



#### **Employee Recognition Award**

Individual Technical Excellence (2024)

For rapidly deploying ATLAS's on-prem GenAl capabilities across Sandia in 4 months, establishing broad accessibility ahead of other national labs.

Awarded to < 0.1% of entire lab.



#### **Employee Recognition Award**

Team Excellence (2024)

### **SKILLS**

#### AI/ML

**Large Language Models Computer Vision** 

**RAG Uncertainty Quantification** 

#### Languages & Frameworks

**Python FastAPI** Gradio LangChain **Transformers** Scikit-Learn **Tensorflow** 

Infrastructure & Tools

**Docker Vector Databases** SQL

**MongoDB MLOps platforms** 

Software Engineering

**Object-Oriented Programming API Design** 

**System Architecture Python Packaging** 

Leadership

**Agile Project Management** Al Consulting

**Education Government Advisory** 

#### **EDUCATION**

# M.S. Electrical and Computer Engineering

**GPA 3.7** / 4.0

**University of Washington** 

• Specialization: Digital Signal Processing

B.S. Electrical Engineering

# **University at Buffalo**

GPA **3.9** / 4.0

· Minor: Computer Science

#### **EXPERIENCE**

# Computer Research Engineer

#### **Sandia National Laboratories**

- · Identified high-impact opportunity through error analysis, redirecting focus to an issue with 10x improvement potential. Developed novel method that achieved nearly 3x enhancement in true positive to false alarm ratio.
- 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

#### **OSTI 2023**

Adams et al.

- Developed novel Bayesian uncertainty framework for ML classification.
- Created STUQO Python 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** 

#### **BSSA 2018**

Ganter et al.

### **CERTIFICATIONS**

**Deep Learning** 

**Machine Learning in Production** 

**IBM Scalable Data Science** 

**Google Cloud Platform** 

**Google Project Management** 

### **VOLUNTEERING**

Dog Walker

**Animal Humane New Mexico** 

**m** 08/2021 - 06/2024

#### **PASSIONS**

📥 🛮 Artificial Intelligence



Coding



**Politics & Government** 



**Rock Climbing** 



**Mindfulness** 



Travel