Ethan Nelson

GitHub: einelson
LinkedIn: Ethan-Nelson
Active Secret Clearance

ethanisaacnelson@gmail.com
(770) 689-7042
Open to Relocation

Machine Learning Engineer

I am a Machine Learning Engineer who is passionate about leveraging AI to drive business impact through automation, predictive analytics, and workflow optimization. I want to use my experience in designing and deploying scalable AI solutions, end-to-end machine learning optimization and automation to drive impact in my next role. I have a proven ability to coordinate efforts across multiple teams and lead team initiatives from the ground up, and am actively seeking a ML Engineer position.

EXPERIENCE

Founding Machine Learning Engineer @ Keep it Private *(Founder)* Mar 2025 – Present

- **Improving model inference speed by 7×** compared to Meta Llama 3.2, enabling faster response times and reduced compute costs.
- **Reducing model size by 5×** through fine tuning, optimization, and quantization techniques, allowing for efficient deployment and lower memory usage in production environments, saving on GPU costs.
- **Developing end-to-end CI/CD pipelines** for continuous model integration and deployment using asyncio, FastAPI, Docker, and Kubernetes, accelerating model release cycles and ensuring scalable deployment.

Software Engineer, Machine Learning @ Stukent Aug 2023 – Mar 2025

- Orchestrated the design and implementation of end-to-end machine learning pipelines and ML life cycle:
    - Built 5 model endpoints to be served to **over 40,000 users** which included integration of **large language models (LLMs)** to interpret students results, dynamically enhancing learning outcomes through adaptive model responses.
    - Reduced an estimated **20% reduction in user churn** with risk analysis model and **~12% reduction in false negatives** through grid search, improving stukents ability to prioritize at-risk users.
- Proactively launched the company's first AI initiative by reaching out to multiple teams to understand their needs and explore ML opportunities. Identified 10 potential projects, presented proposals to the CTO and CPO, and led development of prototypes for 2 high-impact solutions.
- Lead architecture of automated workflows for the training, evaluation and deployment of machine learning models in production Databricks environments from the ground up, leveraging **MLflow** and **pyspark**.
- Developed and fine-tuned **NLP** algorithms in **PyTorch**, including **LSTMs** and **transformers**, implementing a real-time alert system for engineering teams on bug-related issues within the platform.

Machine Learning Engineer @ AmyAI Feb 2023 – Aug 2023

- Reached out to 75+ users to research pain points to better understand impact in product development.
- Used generative AI models to improve communication between companies and customers by creating and deploying custom vector search **RAG pipelines** based on web scraped customer data.
- Deployed APIs in Microsoft Azure via **docker** + **Kubernetes**.

Senior Data Analyst @ iProspect Jan 2022 – Aug 2023

- Increased efficiency in runtime over legacy application by ~250% through optimizing ETL pipelines.
- Addressed ad-hoc requests with a strong command of **Python**, **SQL**, and data transformations, revamping dashboards to enhance visibility of key performance indicators (KPIs) and streamline reporting processes.
- Built scripts to transform and join data to help case study dealing with 50% unattributed data points.

MACHINE LEARNING PROJECTS

Oil Pipeline Risk Detection Capstone Project, Key-Value pair Memory Network, Image colorization Final Project

PROGRAMMING AND TOOLS

Proficient with Python, PyTorch, scikit-learn, MLflow, Spark, Pandas, Numpy, Docker, Databricks; Familiar with LaTeX, C++

EDUCATION

Georgia Institute of Technology, Atlanta, Georgia May 2025

Master of Science (MS), Computer Science; Interactive Intelligence

Relevant Coursework: Natural Language Processing, Knowledge Based Artificial Intelligence, Machine Learning, Quantum Computing, Human Computer Interaction, Machine Learning for Trading, LLM seminar, Introduction to Research.

Current Research: Zero-Shot Classification in Student Question Optimization

Brigham Young University-Idaho, Rexburg, Idaho Sep 2021

Bachelor of Science (BS), Computer Science