

Ethan Nelson

GitHub: [einelson](#)
LinkedIn: [Ethan-Nelson](#)

ethanisaacnelson@gmail.com
(770) 689-7042

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

Software Engineer, Machine Learning at Stukent

Aug 2023 – Mar 2025

- Orchestrated the design and implementation of end-to-end machine learning pipelines and ML life cycle:
 - 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.
 - Estimated **20% reduction in user churn** with risk analysis model and **~12% reduction in false negatives** through grid search.
- 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.
- Headed 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 at AmyAI, (Co-Founder)

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 at 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

Key-Value Memory Network Final Project

Oct 2024

- Built a KV memory Network using **PyTorch** which learns to access data stored in a database; very similar to RAG.
- Generated a synthetic data training set and processed data with tokenization and multi-hot encoding.

Fault Detection Capstone Project

Apr 2021

- PCA** and **Clustering** (DBSCAN, K-means) to identify faults in chemical pipelines. Performed research on different clustering techniques and how different numbers of clusters affected results.
- Findings visualized into web app that included interactive 3D graphs

PROGRAMMING AND TOOLS

Proficient with Python, PyTorch, scikit-learn, MLflow, Spark, Docker, Databricks, Azure, Google Suite; Familiar with LaTeX, C++

EDUCATION

Georgia Institute of Technology, Atlanta, Georgia

Apr 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

Relevant Coursework: Machine Learning and data Mining, Computer Vision, Databases, Data structures, Discrete Mathematics, Linear Algebra.