Ethan Nelson

GitHub: einelson
LinkedIn: Ethan-Nelson

ethanisaacnelson@gmail.com
(770) 689-7042

Software Engineer, Machine Learning

Machine Learning Engineer with a proven track record of designing and deploying scalable AI solutions across NLP, deep learning, and cloud-based ML systems. Experienced in full-cycle/end-to-end ML development—from data aggregation and model training to deployment and evaluation—leveraging frameworks like PyTorch, MLflow, and Databricks. Adept at collaborating with stakeholders to scope, develop, and deploy AI/ML solutions that drive impact. Passionate about applying state-of-the-art ML techniques to solve complex challenges.

PROGRAMMING AND TOOLS

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

EXPERIENCE

Software Engineer, Machine Learning at Stukent, Remote — Aug 2023 – Present

- Spearhead the design and implementation of end-to-end machine learning pipelines and ML life cycle, resulting in 5 model endpoints served to over 40,000 users.
- Architect automated workflows for the training, evaluation and deployment of machine learning models in production Databricks environments through use of MLflow and pyspark.
- Developing and fine-tune NLP algorithms in PyTorch, including LSTMs and transformers, implementing a real-time alert system for engineering teams on bug-related issues within the platform.
- Integrate large language model (LLM) to interpret student performance data dynamically, enhancing learning outcomes through adaptive model responses.
- Leading team for company research initiative. Originally conducted research and proposed 10 machine learning methods to enhance platform functionality, resulting in building prototypes for 2 projects.

Machine Learning Engineer at AmyAI, Remote — Feb 2023 – Aug 2023

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

Senior Data Analyst at iProspect, *Remote* — 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

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

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