

ETHAN NELSON

(770) 689-7042 | ethanisaacnelson@gmail.com | [linkedin.com/in/ethan-nelson/](https://www.linkedin.com/in/ethan-nelson/) | <https://einelson.github.io/> | Secret Clearance

Dynamic and versatile machine learning engineer with a robust background in designing, implementing, and deploying AI solutions. Proven track record in leading machine learning and data operations initiatives, with extensive experience in natural language processing, model deployment architecture, and all aspects of the AI lifecycle.

Professional Experience

Machine Learning Engineer & Data Ops

Aug 2023-Present

Stukent

Remote

- Spearhead the design and implementation of end-to-end machine learning and data operations pipelines, including the establishment of SQL data warehouses and governance protocols that enhance data retrieval efficiency through Spark/PySpark and tools like Databricks Unity Catalog and MLflow.
- Architect automated workflows for the training, evaluation and deployment of machine learning models in production environments.
- Develop and fine-tune NLP algorithms, including LSTMs and transformers, with a focus on hyperparameter tuning to classify support tickets, implementing a real-time alert system for engineering teams on bug-related issues within the platform.
- Integrate large language models (LLMs) to interpret student performance data dynamically, enhancing learning outcomes through adaptive model responses.
- Conducted research and proposed ten advanced AI methodologies to enhance platform functionality, culminating in the acceptance of two projects: one leveraging generative AI to elucidate student scores and another focused on developing an intelligent advertisement word scorer.

Senior Data Analyst

Jan 2022-Aug 2023

iProspect

Remote

- Lead efforts in automation of data delivery by architecting new ETL pipeline logic and managing team of data engineers. New pipeline increased efficiency in runtime over legacy application by ~250%.
- 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.

Software Engineer

May 2021-Dec 2021

ARCTEC Solutions

Middleburg, VA

- Developed automation scripts for remote software installation, significantly reducing manual setup time and enhancing operational efficiency.
- Designed a data dissemination tool that aggregates data from APIs and remote databases, facilitating seamless integration into a local database for analysis.
- Enhanced a signal intelligence device to optimize packet transmission to external applications, improving data communication and processing capabilities.

Data Science Intern

Jan 2021-April 2021

Snow Data Science

Remote

- Leveraged data visualization techniques to present findings in a clear and actionable manner, enhancing stakeholder comprehension and decision-making.
- Researched unsupervised machine learning algorithms, focusing on clustering methods and dimensionality reduction techniques (PCA) to optimize data analysis processes.

Research/ Projects

Co-Founder AmyAI (2023)- Using LLMs and ChatGPT to improve communication between companies and customers by creating and deploying custom RAG pipelines based on customer data. Deploying APIs via flask in Microsoft Azure. Use of CI/CD to streamline deployment. Startup environment.

Point Cloud Classification- Use neural network to process spatial lidar imagery for object classification in automated warehouse robots. This aimed to fully automate warehouse robots to safely navigate the warehouse and detect which objects were around it.

Technical Experience

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|--------------------|---------------------------|--------------------------|
| • Python 3 | • NLP & Transformers | • SQL/Spark |
| • Machine Learning | • Databricks | • Data Science/Analytics |
| • Deep Learning | • Artificial Intelligence | • Open CV |
| • Torch / PyTorch | • Linux (Ubuntu, RedHat) | • Microsoft Azure |

Education

Georgia Institute of Technology

2022-2025

MS. Science in Computer Science / Specialization in Interactive Intelligence

Remote

Notable Classes: Natural Language Processing, Knowledge based Artificial Intelligence, Machine Learning, Quantum Computing, Human Computer Interaction, Machine Learning for Trading

Brigham Young University-Idaho

2018-2021

BS. Science in Computer Science

Rexburg, ID

Notable Classes: Machine Learning and data Mining, Computer Vision, Databases, Data structures, Discrete Mathematics, Linear Algebra