

MY CAREER



- Machine Learning Engineering Project Lead at Northwestern University Machine Learning Project (3 Months)
- Machine Learning Research Assistant at University Research Lab (7 Months)
- Machine Learning Engineer Capstone Student at Northwestern University Capstone Project (8 Months)

University Research Lab 📅 January 2025 - August 2025 📍 Evanston, IL

Supported microscopy research through PyTorch workflows, scheduled preprocessing, containerized training, cloud artifact storage, and clear experiment records. Contributions helped faculty and graduate researchers repeat runs, inspect errors, and discuss practical model limits.

- Developed **PyTorch** image classification workflow for 18,000 microscopy images, supporting repeatable research runs.
- Scheduled preprocessing and feature tasks with **Airflow**, recording inputs and parameter settings.
- Reviewed held-out validation and learning curves, identifying overfitting across image classes.
- Containerized training dependencies with **Docker**, reducing setup differences across four lab workstations.
- Stored experiment artifacts in cloud object storage, preserving data versions and hyperparameters.
- Coauthored research presentation translating model limits into practical testing recommendations for faculty.

Machine Learning Engineer Capstone Student

Northwestern University Capstone Project 📅 September 2025 - May 2026 📍 Evanston, IL

Designed a production-style demand forecasting service for simulated retail operations, connecting pandas preparation, scikit-learn training, Docker deployment, **CI/CD** validation, and **model monitoring**. Coordinated success measures with an operations stakeholder and documented decisions for dependable use.

- Designed demand forecasting service with **pandas** preparation and tested **scikit-learn** training components.
- Created feature modules for promotions, seasonality, inventory history, and product groups.
- Validated schemas, nulls, and leakage risks before training models across product categories.
- Packaged batch prediction service with Docker, documenting deployment steps for a cloud sandbox.
- Added Git-based CI checks for tests, linting, schemas, and container builds.
- Set mean absolute error targets with operations **stakeholders**, guiding monitoring and retraining decisions.

PROJECTS

Cloud Model Monitoring Sandbox 📅 May 2026

Created a separate cloud sandbox for batch prediction monitoring, artifact review, alert logic, and retraining notes. Project connected deployment records with practical model-performance checks.

Airflow Feature Pipeline Study 📅 August 2025

Built a scheduled Airflow study pipeline for dataset checks, feature generation, parameter capture, and experiment records. Work focused on repeatable runs and clear handoffs.

LEADERSHIP & AWARDS

- Dean's List, Northwestern University, 2024 - 2026
- Undergraduate Research Presentation Award, Northwestern University, 2025
- Finalist, Midwest Student Data Challenge, 2026

CERTIFICATIONS

- Machine Learning Specialization, Coursera 📅 2025
- AWS Academy Cloud Foundations 📅 2025
- TensorFlow Developer Foundations 📅 2026

PROFESSIONAL AFFILIATIONS

- Machine Learning Study Group Coordinator, Northwestern University, 2025 - 2026
- Teaching Assistant, Introduction to Programming, Northwestern University, 2025
- Member, Northwestern Data Science Club, 2024 - 2026

ADDITIONAL INFORMATION

Work Status : Authorized to work in United States. No sponsorship required.

REFERENCES

AVAILABLE ON REQUEST