

ERIK NORDBY

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Education

Georgia Institute of Technology, Remote

Masters of Science in Computer Science (Online)

Expected Conferral: May 2025

GPA: 4.0

University of Pittsburgh, Pittsburgh, PA

Conferred: April 2022

Bachelor of Science in Computer Science

Bachelor of Science in Mathematics and Economics

Professional Experience

UPMC, Pittsburgh PA

Software Engineer - Rotational

January 2022-Present

- Rotated through five teams throughout the organization including software engineering, cloud engineering, data warehousing, and network security teams
- Developed backend processes in .NET Core to ensure synchronization of identity management with vendors
- Created tools with Python and JavaScript to automate common tasks and monitor network resources
- Automated deployment and maintenance of computational resources in cloud infrastructure
- Developed and maintained team documentation to consolidate tech stacks across sub-teams

UPS - Advanced Technology Group, Atlanta GA

Advanced Analytics Intern

May-August 2021

- Implemented algorithms based on current academic papers to extract and utilize geospatial data
- Developed and deployed applications for internal users to leverage algorithms & solutions

Biomotivate, Pittsburgh PA

Data Science Intern

February-May 2021

- Performed data preprocessing and cleaning on data collected from wearable devices
- Reviewed research articles for processing wearable device data

Relevant Volunteer & Community Experience

SPAR & PIK GaNe, Remote

July 2024 - Present

Volunteer

- Implementing extensions to existing deep QLearning agent based on the Rainbow algorithm
- Optimizing codebase through refactoring, documentation, and migration to GPU infrastructure

AI Safety Fundamentals, Remote

Participant

February 2024-May 2024

- Participated in weekly discussions and reading centered on the Governance and Alignment of AI
- Developing tooling to automate detection of attention heads responsible for translation in LLMs by using convolutions
- Explored 200 Open Problems in Mechanistic Interpretability and codebases aimed at solving them

Coursework and Personal Projects

Multi-Agent Simulation for Social Media Toxicity

October-November 2024

- Extended CMU's CASOS lab's social media simulation to model toxicity for the purpose of evaluating moderation techniques

LLM Task Adaptation Techniques

March-April 2024

- Coordinated with and organized fellow students to compare various task adaptation techniques for language models
- Implemented context distillation algorithm based on recent research papers

Knowledge Repository Agent

May 2024

- Developed a Retrieval Augmented Generation enabled agent to manage knowledge repos for inaugural OMSCS hackathon

Algorithmic Trading Bot

November 2023

- Developed bot to automatically trade in the ABIDES trading environment using Q-Learning and a variety of indicators

Relevant Skills

Languages: Python, JavaScript, SQL, Java, PowerShell, C#, R

Web Development: React, Angular, Vite, .NET Core, Selenium

Machine Learning Packages: PyTorch, HuggingFace Transformers, HuggingFace Datasets, LangChain

Cloud & HPC Related Tools: Docker, Singularity, Slurm, Azure

Relevant Coursework

Graduate Computer Science Courses: Deep Learning, Internet Research Methods, Machine Learning for Trading

Undergraduate Math & Statistics Courses: Linear Algebra, Differential Equations, Mathematical Statistics, Intro to Theory 1-Var Calc.

Undergraduate Computer Science Courses: Data Structures & Algorithms, Machine Learning, Deep Learning