

# 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*

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## Professional Experience

### UPMC, Pittsburgh, PA

Software Developer - Information Technology Rotational Program

January 2022-Present

- Rotated through five teams throughout the organization including software engineering, cloud engineering, data warehousing, and network security teams
- 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 backend process in .NET Core to ensure synchronization of identity management with vendors
- 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
- Implemented frameworks and tools to allow for faster development and deployment of models and applications

### 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
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## Volunteer & Community Experience

### AI Safety Fundamentals, Pittsburgh PA

Participant

February 2024-Present

- Participated in weekly discussions and reading centered on the Governance and Alignment of AI
  - Implementing a possible solution for one of the 200 Open Problems in Mechanistic Interpretability
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## Coursework and Personal Projects

### LLM Interpretability Automation

April-May 2024

- Developing tooling to automate detection of attention heads responsible for translation in LLMs by using convolutions

### Comparison of Techniques for LLM Task Adaptation

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 assist with the addition & retrieval of information to/from a knowledge repository

### Algorithmic Trading Bot

November 2023

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

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

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

*Data Processing Packages:* matplotlib, Plotly

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

*Cloud Related Tools:* Azure ARM Templates, Docker, Azure CLI & Console

*General Software Engineering Concepts:* Object Oriented Programming, Algorithms, Data Structures

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## Relevant Coursework

*Graduate Computer Science Courses:* Deep Learning, Machine Learning for Trading

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

*Undergraduate Economics Courses:* Game Theory, Applied Econometrics, Financial Econometrics (Time Series Analysis)

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