

# 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 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
- Overhauled DevOps process by introducing CI/CD pipelines to existing workflows
- 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

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## Relevant Volunteer & Community Experience

### SPAR & PIK GaNe, Remote

July 2024 - October 2024

Volunteer

- Assisted with implementing extensions to existing deep Q-Learning agent
- Optimized codebase through refactoring, documentation, and explored methods for easier environment setup

### AI Safety Fundamentals, Remote

Participant

February 2024-May 2024

- Participated in weekly discussions and reading centered on the Governance and Alignment of AI
- Implemented tooling for one of the 200 Open Problem in Mech Interp to automate detection of translation heads

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## Coursework and Personal Projects

### Multi-Agent Simulation for Social Media Toxicity

October-November 2024

- Enhanced CMU CASOS lab's social media simulation to evaluate the effectiveness of moderation on toxicity reduction

### LLM Task Adaptation Techniques

March-April 2024

- Coordinated with and organized fellow students to compare 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 reinforcement learning

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## Relevant Skills

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

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

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

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

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## 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