Adam Cahall

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EDUCATION

Cornell University **August 2025 – May 2026**
Intended M.Eng., Computer Science *Ithaca, NY*
Cornell University **August 2021 – May 2025**
Pursuing B.S., Computer Science, with minors in Mathematics and Linguistics *Ithaca, NY*

- **GPA: 4.07/4.3**
- **Selected Coursework:** Computational Imaging (Graduate), Structure of Information Networks (Graduate), Machine Learning, Large-Scale ML, Computer Vision, Natural Language Processing, Reinforcement Learning, Robot Learning, Algorithms, OOP and Data Structures, Systems Programming, Probability I/II, Stochastic Processes, Optimization, Linear Algebra, Numerical Analysis.
- **Teaching Experience:** Robot Learning TA (Spring 2024, Fall 2024)

WORK EXPERIENCE

Amazon **May 2024 – August 2024**
Software Development Engineer Intern *Tempe, AZ*

- Redesigned the computation and storage of a series of seller-facing statistics using AWS Lambda, DynamoDB, SQS, and SNS.
- Will reduce ongoing cost by 40% vs. current system and reduce latency by 60% for page visited by thousands of Amazon sellers daily.

Owl Autonomous Imaging **May 2022 – July 2022**
Machine Learning Intern *Fairport, NY*

- Trained a stereo matching network for improved autonomous vehicle ranging accuracies over previously used method.
- Modified open-source object detection network (YOLOv5) so that it could be trained with our multimodal dataset and evaluated its performance when using different multimodal fusion techniques.
- Developed a visualization technique to create composite images from images captured by multiple sensing modalities to highlight each of their strengths in object detection (to be used in marketing).

RESEARCH EXPERIENCE

Cornell University **October 2024 – Present**
CS Research Assistant *Ithaca, NY*

- Working with Professor Kristina Monakhova on a novel computational imaging approach to recovering depth from event cameras.

Cornell University **June 2023 – April 2024**
CS Research Assistant *Ithaca, NY*

- Worked with Professor Thorsten Joachims on developing a new training technique for Large Language Models that uses implicit human feedback to align models with user preference.
- Implemented simulated human feedback using Llama 2 (7B/13B); incorporated distributed training techniques (HuggingFace Accelerate, etc.) and quantized models to efficiently run experiments.
- Awarded $6,000 BURE research grant to support work.

Cornell University **September 2022 – April 2023**
ORIE Research Assistant *Ithaca, NY*

- Worked with Professor Jamol Pender in the Operations Research Department on modeling COVID-19 spread in childcare centers using Python to evaluate current and potential future health and safety protocols.

Rochester Institute of Technology **July 2020 – August 2020**
Imaging Science Research Intern *Rochester, NY*

- Supported multispectral imaging project for deciphering 500-year-old ancient text documents.
- Created an OCR pipeline that aligned, denoised, thresholded, etc. images, divided cleaned-up images into rows and words, and fed row/word images into Tesseract, resulting in improved text recognition accuracy.

PUBLICATIONS

- Aaron David Tucker, Kianté Brantley, **Adam Cahall**, Thorsten Joachims. *Coactive Learning for Large Language Models using Implicit User Feedback.* International Conference on Machine Learning (ICML) 2024.
- **Adam Cahall**, Jasmine Eng, Jane Gao, Ben Hilbert, Jamol Pender. *Using Simulation to Study the Impact of COVID-19 Policies on the Availability of Childcare.* Winter Simulation Conference 2023.

SKILLS & INTERESTS

- **Programming Languages:** Python, Java, C++
- **Libraries:** PyTorch, Hugging Face, OpenCV, OpenAI Gym, Scikit-learn, NumPy, Pandas, Matplotlib, CVXPY, Pdb
- **Interests:** Ultimate Frisbee Team, Pickleball, Basketball, Electric Bass