

# Audrey Douglas

Cambridge, MA | 320-339-9808 | adouglas@mit.edu

## EDUCATION

<b>Massachusetts Institute of Technology</b> , Cambridge, MA	May 2025
<i>Masters of Engineering and Bachelors of Science in Computation and Cognition</i>	5.0 GPA
Coursework: Introduction to Machine Learning, Advances in Computer Vision, Natural Language Processing, Fundamentals of Programming, Cognitive Robotics, Artificial Intelligence, Sensorimotor Learning	
<b>University of Minnesota</b> , Minneapolis, MN	May 2021
<i>Post-Secondary Enrollment Option</i>	4.0 GPA
Coursework: Advanced Algorithms, Linear Algebra, Introduction to Probability, Discrete Math	

## PROFESSIONAL EXPERIENCE

<b>Aira</b> , Remote	June 2024 – Present
<i>Machine Learning Research Intern</i>	
<ul style="list-style-type: none"><li>Analyzed use cases of Access AI using various embedding and clustering techniques</li><li>Automated photo reframing instructions for blind and low vision individuals</li><li>Created optical character recognition tool for GPT pipeline</li><li>Introduced retrieval augmented searching on video call transcripts</li></ul>	
<b>Massachusetts Institute of Technology</b> , Cambridge, MA	June 2022 – Aug 2023
<i>Undergraduate Researcher, Fiete Lab</i>	
<ul style="list-style-type: none"><li>Developed novel computer vision architecture incorporating lateral inhibition and hemisphere separation</li><li>Trained, finetuned, and adjusted the model for performance improvements</li><li>Investigated how visual overlap contributes to visual recognition</li></ul>	
<b>Massachusetts Institute of Technology</b> , Cambridge, MA	Feb 2023 – Present
<i>Teaching Assistant, Introduction to Machine Learning</i>	
<ul style="list-style-type: none"><li>Assist students with conceptual and coding problems during lab and office hours</li><li>Review weekly labs and homework for clarity, focusing on the pedagogy of teaching machine learning</li></ul>	
<b>Gaia AI</b> , Boston, MA	June 2023 – Aug 2023
<i>Robotics Intern</i>	
<ul style="list-style-type: none"><li>Automated computer vision data collection, image quality processing, and machine learning model training</li><li>Created and deployed an internal website in React.js to monitor product statistics and usage</li><li>Restructured MongoDB database to incorporate preprocessing and managed S3 image database</li></ul>	
<b>Massachusetts Institute of Technology</b> , Cambridge, MA	June 2022 – Aug 2023
<i>Undergraduate Researcher, Info Lab</i>	
<ul style="list-style-type: none"><li>Spearheaded the development of a simulation platform to generate social interaction videos</li><li>Created an experimentation platform using React.js with integrated eye tracking</li><li>Implemented a machine learning pipeline to predict intentions in social interactions</li></ul>	
<b>Prime Therapeutics</b> , Eagan, MN	May 2021 – July 2021
<i>Automation Intern</i>	
<ul style="list-style-type: none"><li>Automated collection of Miro license information for 1000+ employees</li><li>Integrated into the automation team, learning testing practices and development standards</li><li>Collaborated on internal course registration website utilizing React.js</li></ul>	

## SKILLS & INTERESTS

**Programming:** Python, Java, HTML/CSS/JavaScript, Git, PyTorch, Tensorflow, AWS, React.js, MongoDB, LaTeX

**Interests:** Logic puzzles, Baking, Museums, Architecture, Artificial Intelligence

## PROJECTS & INVOLVEMENT

<b>Mimicking Tennis Playstyles</b> - Used generative adversarial imitation learning to copy and blend Atari Tennis playstyles
<b>Pruning Symmetrical Neural Networks</b> - Created method to preserve symmetrical networks during pruning
<b>Predicting LLM Hallucinations</b> - Developed compact transformer with 60% accuracy to predict GPT-3 hallucinations
<b>Writing Quality Judge</b> - Created transformer method for judging writing quality with 73% accuracy
<b>Latent Embedding Research</b> - Studied linear separability of object positions in CNN image embeddings
<b>Forest Fire Navigation</b> - Created a reinforcement learning agent that navigated to a target in a risky environment
<b>HackMIT</b> - Organized a hackathon for 1000+ students, contributing logistical and development work