

## Education

### Massachusetts Institute of Technology (MIT)

Cambridge, MA

Candidate for Bachelor of Science in Mathematics with Computer Science, **GPA: 5.0/5.0**

May 2025

Minors in Statistics and Data Science and History

*Activities and Awards:* Envisioning the Future of Computing Prize Honorable Mention, Social and Ethical Responsibilities of Computing Surveillance Scholar, Dorm Treasurer

*Coursework:* Introduction to Machine Learning, Software Construction, Statistics, Computation and Applications, Statistical Reinforcement Learning, Statistical Learning Theory, Mathematical Statistics, Design and Analysis of Algorithms

## Professional Experience

### SESCO Enterprises

Pittsburgh, PA

*Quantitative Analyst Intern*

May 2024 – August 2024

- Analyzed data from over 600 solar farms across 3 years to identify deficiencies in the forecasting model used to estimate hourly solar energy output
- Developed an efficient and responsive model to incorporate solar panel information, weather data, and prior solar output
- Reduced overall forecasting error by more than 40% using an interpretable model based on scientific research and data analysis

### Just-A-Start

Cambridge, MA

*Data Analysis Intern*

May 2023 – August 2023

- Analyzed financial records and personal statements collected from 25 individuals across 3 years alongside census data to detect progress as a result of non-profit efforts
- Produced statistics and visualization to argue the efficacy of the program for a white paper sent to stakeholders
- Utilized technical analyses and participant responses to propose improvements for future program iterations

### Code for Good

Cambridge, MA

*Consultant*

October 2022 – December 2022

- Spearheaded a team of 5 students in advising the Allston Brighton Community Development Corporation
- Processed over 40 years of census data to understand changing demographics in the Allston Brighton community and inform future housing development
- Developed a data visualization highlighting these changes for use on the Allston Brighton CDC's website

### IRS Criminal Investigation

Remote

*Data Analysis Fellow*

June 2022 – August 2022

- Selected from an applicant pool of 1,600 students as part of the Civic Digital Fellowship, a Coding it Forward fellowship that empowers early-career technologists to explore careers in the federal government
- Analyzed over 3 million Ethereum transactions to develop an algorithm for tracking illegal cryptocurrency transactions
- Tested and evaluated APIs for linking processed datasets through Wikidata records
- Presented projects and results to IRS leadership

## Research Experience

### MIT Economics

Cambridge, MA

*Student Researcher*

January 2024 – May 2024

- Utilized prompt engineering with OpenAI's Whisper automatic speech recognition for applications in Indian court transcriptions
- Fine-tuned, deployed, and evaluated large language models in both AWS and Azure to allow for efficient transcription of legal terms in numerous linguistic contexts

### MIT Computer Science and AI Laboratory

Cambridge, MA

*Student Researcher*

January 2023 – June 2023

- Fine-tuned large language models for completion of a dataset of more than 4,500 MIT math and computer science problems
- Utilized prompt engineering and grading techniques including few-shot, chain-of-thought, and expert prompting to improve the outputs of GPT-4 on MIT dataset
- Co-wrote and produced data visualizations for a research paper discussing the results

### USAF-MIT AI Accelerator

Cambridge, MA

*Student Researcher*

January 2022

- Developed a one-shot machine learning algorithm to identify and grade piloting maneuvers for applications in pilot training
- Presented findings to members of the MIT and Air Force communities

## Skills

**Programming Languages:** Python, Julia, R, SQL, Typescript

**Packages:** TensorFlow, PyTorch, NumPy, Pandas, Jupyter

**Additional Skills:** Prompt Engineering, Data Analysis, Statistical Modeling, LaTeX, HTML, Excel