

MASON DUBOEF

+1 702-513-4993 · mduboeff@gmail.com · mduboeff@umass.edu

[Website](#) · [LinkedIn](#) · [GitHub](#)

EDUCATION

University of Massachusetts Amherst

Dec 2026 (expected)

M.S. in Computer Science

GPA: 3.93/4.0

Relevant courses: Reinforcement Learning | AI Alignment | Machine Learning | Artificial Intelligence | Algorithms, Game Theory & Fairness | Cyber Effects | Linear Algebra

Rensselaer Polytechnic Institute (RPI)

June 2023

B.S. in Computer Science

Concentration in AI & Data

Relevant courses: Intro to AI (later mentored) | Computational Economics | Intro to Network Science | Foundations of CS (Theory) | Intro to Algorithms | Data Structures | Multivariable Calculus & Matrix Algebra | Differential Equations | Operating Systems | Prog. Languages | Computability & Logic

RESEARCH INTERESTS

I am broadly interested in reinforcement learning, including work in alignment and partial observability.

RESEARCH EXPERIENCE

Distributionally Aligned Contrastive Preference Learning

Feb 2026 - Present

Supervisor: Prof. Scott Neikum

SCALAR Lab - UMass Amherst

- Learning pluralistic policies directly from preference data, maintaining diverse dominant strategies

Algorithmic Fair Allocation for Food Rescue

Sep 2025 - Dec 2025

Supervisor: Prof. Yair Zick

FED Lab - UMass Amherst

- Fair and efficient allocation of food under changing dynamics and stochastic availability
- Integer linear program optimized routing of drivers from food donors to receiving agencies

Interpretable Prediction & Large-Scale Analysis of Judging in Boxing

Jan 2024 - Present

Supervisor: Dr. Allan Svejstrup Nielsen

Jabbr

- Developed “AI boxing judge” with agreement rate comparable to top-level judges
- Supervised learning mapped stats output by computer vision system onto judges’ scores
- Evaluation of top judges and analysis of their stylistic differences
- Oral presentation at *2026 MIT Sloan Sports Analytics Conference* as a competition finalist

Stable Matching in OPRA Voting Platform

Sep 2022 - Jun 2023

Supervisor: Prof. Lirong Xia

RPI

- Added support for stable matching problems to online preference reporting and aggregation platform

PUBLICATION

M. duBoef, T. Romeas, M. Charbonneau, & A. S. Nielsen. *Interpretable Prediction and Large-Scale Analysis of Judging in Professional Boxing*. MIT Sloan Sports Analytics Conference (MIT SSAC), March 2026. [Finalist – Top 7 among 197 submissions]

PROFESSIONAL EXPERIENCE

Jabbr - Research Intern

Jan 2024 - Present

Reference: Dr. Allan Svejstrup Nielsen (CEO)

- ML-based research on judging in professional boxing

Mammoth Media - Data Science Intern

Aug 2021 - Jan 2022

References: Solene Schwartz (COO) and Zachary Chow (General Manager)

- Statistical analysis of TikTok ads, informing branded content creation & media buying strategy

Meta - Data Challenge Finalist

Apr 2021 - Aug 2021

- Four-month training program at Meta, mentored by Facebook data scientists and engineers

Luum.io - Software Engineering Intern

May 2020 - Aug 2020

Reference: Sebastien Gouin-Davis (CEO)

- Web and android development for lighting control platform

PERSONAL PROJECTS

Multi-Objective Preference Inference from Demonstration

March 2026 - Present

- Action-by-action Bayesian inference of demonstrator's unknown preferences over multiple objectives
- Assignment of Pareto-optimal policy from convex coverage set based on inferred posterior

NYC Subway Challenge

Oct 2025 - Dec 2025

- Hierarchical RL used to find near-optimal (fastest) routes through all 472 NYC subway stations

Willow

Mar 2023 - Jun 2023

- Expanded web-app used to build and assign truth trees, enabling Davis-Putnam type logic problems
- Pursued under Prof. Bram Van Heuveln (RPI)

Have I Been Gerrymandered?

Sep 2022 - Dec 2022

- Interactive online map indicates how gerrymandered every congressional district is
- Developed novel extension to efficiency gap, a measure of district fairness given electoral data

Dynamic Subway Tolling for Congestion Deterrence

Mar 2022 - Jun 2022

- Devised optimal toll pricing to deter congestion and promote efficiency on NYC's 1 Line
- Used Nash equilibrium analysis and traffic simulation based on MTA data

Automatic Door Control

Jun 2021 - Aug 2021

- Android development and circuit design for accessibility project, enabling remote opening of doors

SKILLS

Languages

Python, C/C++, Java, Django, SQL, TypeScript, Kotlin, React.js, Prolog, Lisp, Haskell, & MIPS Assembly

Tools

TensorFlow, PyTorch, Sklearn, Pandas, Numpy, Git, Matplotlib, Jupyter Notebook, Google Colab, Gurobi, Postman, Gephi, LaTeX, Beautiful Soup & WordPress