

# Ben Abramowitz

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## **EDUCATION**

**Ph.D.** | Computer Science GPA: 3.9 Fall 2016 - Summer 2021  
Rensselaer Polytechnic Institute | Advisor: Elliot Anshelevich

**Visiting Student** Spring 2020  
Weizmann Institute of Science | Advisor: Ehud Shapiro

**Master of Science** | Computer Science GPA: 3.9 Fall 2016 - Spring 2019  
Rensselaer Polytechnic Institute | Advisor: Elliot Anshelevich

**Bachelor of Science** | Mathematics GPA: 3.5 Fall 2012 - Spring 2016  
Secondary Major: Computer Science Minor: Physics  
Tulane University | Advisor: K. Brent Venable

**Bachelor of Arts** | Economics GPA: 3.5 Fall 2012 - Spring 2016  
Tulane University

## **WORK EXPERIENCE & AWARDS**

**Postdoctoral Research Fellow** | Tulane University Summer 2021 - Present  
Supervisor: Nicholas Mattei

- Conduct and publish research on AI, Multi-Agent Systems, and Computational Economics
- Design approximation algorithms with provable guarantees using incomplete and imperfect information
- Solve theoretical problems of matching, facility location, resource allocation, clustering, voting, and others
- Analyze the performance of mechanisms using Monte Carlo simulation and agent-based modeling
- Apply methods of machine learning to learn mechanisms with desirable properties (e.g. satisfy axioms)
- Train models of agent behavior using reinforcement learning

**Research Intern** | IBM Summer 2018  
Manager: Nicholas Mattei

- Worked independently on a novel preference aggregation mechanism for large-scale populations
- Published paper at IJCAI 2019
- Managed by Dr. Nicholas Mattei and Dr. Michael Witbrock

**Research and Teaching Assistant** | RPI Fall 2016 - Summer 2021

- TA: Gave lectures, ran labs, graded assignments and exams, and held office hours
- TA: Design and Analysis of Algorithms, Intro to Algorithms, and Graph Theory
- RA: Published research on approximation algorithms for preference aggregation

## **COMMUNITY INVOLVEMENT**

- Chair | Games, Agents, and Incentives Workshop at AAMAS 2022-2023
- Panelist | AAMAS Doctoral Consortium May, 2023
- Program Committee Member | IJCAI, AAAI, AAMAS, COMSOC, AIES 2023
- Program Committee Member | IJCAI, AAAI, NeurIPS, JAIR, M-PREF, EAAMO 2022
- Contributor | Mechanism Design for Social Good working group on Civic Participation Fall 2022
- Graduate Student Representative | RPI Fall 2017 - Spring 2018

## **CERTIFICATIONS**

- Java Programming | Coursera Certificate ([link](#)) | Duke University 2020
- JavaScript, HTML, and CSS | Coursera Certificate with Honors ([link](#)) | Duke University 2020
- Databases and SQL for Data Science with Python ([link](#)) | Coursera Certificate | IBM 2020

## **PROFICIENCIES**

- Advanced: Python (PyTorch, Pandas, Numpy, Matplotlib), Mathematica, Git, LaTeX
- Intermediate: MySQL, Java, Matlab, Excel
- Novice: Javascript, HTML, CSS, NetLogo, C++, Jekyll