

# Avery Powers

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## EDUCATION

<b>Massachusetts Institute of Technology</b> , Cambridge, MA	Expected May 2030
PhD in <b>Operations Research</b> with <b>Retsef Levi</b> and <b>Ali Aouad</b>	
Relevant Courses: <b>Intro to Mathematical Programming, Machine Learning, Discrete Probability and Stochastic Processes, Econometric Data Science</b>	
<b>Northwestern University</b> , Evanston, IL	Jun 2025
Bachelor of Arts in <b>Mathematics</b> (with honors) and <b>Music</b>   GPA: <b>3.975/4.000</b>	
Relevant Courses: <b>Intro to Optimization, Macroeconomics, Prob &amp; Stats for Econometrics, Intro to Stats &amp; Data Science, Abstract Algebra, Computer Programming, Real Analysis</b>	

## RESEARCH PROJECTS

Notes on the Orbit Method (Senior Thesis)   <b>Northwestern Univ. Math Department</b>	Sep 2024 - May 2025
<ul style="list-style-type: none"><li>Built a graduate-level understanding of the orbit method through independent reading</li><li>Connected twice weekly with advisor to discuss progress, understanding, notes, and questions</li><li>Developed original thesis paper and presentation reviewed by Northwestern Univ. Math Dept.</li></ul>	
Coadjoint Orbits of Matrix Supergroups via Poisson Brackets   <b>Northwestern Univ.</b>	Jun 2024 - Aug 2024
<ul style="list-style-type: none"><li>Earned Northwestern Summer Undergraduate Research Grant through 2-page grant proposal</li><li>Developed conceptual knowledge (e.g. superspaces, Poisson brackets) via self-guided reading</li><li>Discussed progress, new findings, and upcoming plans with research advisor in weekly meetings</li><li>Summarized and presented process and results in the form of a research report written in LaTeX</li></ul>	

## WORK EXPERIENCE

Undergraduate Researcher   <b>Northwestern Univ., Evanston, IL</b>	Jun 2024 - Aug 2024
<ul style="list-style-type: none"><li>Funded research project as described above</li></ul>	
Music Assistant   <b>Marriott Theatre, Lincolnshire, IL</b>	Jun 2024
<ul style="list-style-type: none"><li>Organized task lists and musical materials; proposed and recorded changes to score of show</li></ul>	
STEM Education Outreach Intern   <b>Learning Undefeated, Gaithersburg, MD</b>	Jun 2022 - Jul 2022
<ul style="list-style-type: none"><li>Led STEM-related lessons and classroom activities for up to 36 middle school students per day</li><li>Prepared, led, oversaw, and cleaned lab experiments to facilitate learning and ensure safety</li><li>Supported students in various tasks such as performing calculations and using lab equipment</li></ul>	

## LEADERSHIP AND ACTIVITIES

Graduate Research Opportunities for Women Conference Attendee   <b>Columbia Univ.</b>	Sep 2024
<ul style="list-style-type: none"><li>Attended lectures and panel discussions hosted by mathematicians at universities across the U.S.</li><li>Interacted with professors and graduate students about mathematical research</li></ul>	
Co-Music Director, Composer/Lyricist, Project Manager, etc.   <b>The Waa-Mu Show</b>	Jan 2022 - May 2025
<ul style="list-style-type: none"><li>Create original musicals annually with 20+ person writing team; Project Manager for 2024-2025</li><li>Lead team in creating original songs and teaching music to cast as 2024-2025 Co-Music Director</li><li>Oversaw 7-person team in creating 25 new orchestrations as 2023-2024 Co-Lead Orchestrator</li><li>Recruited and mentored 21 music team members as 2022-2023 Music Coordinator</li></ul>	

## SKILLS

Language: Intermediate Spanish, Beginner German

Computer: Proficiency in Microsoft Office, LaTeX; Familiarity with Python, R, MATLAB, GitHub