

# Rafie Walker

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## Education

<b>Université de Paris-Saclay</b> <i>Orsay, France</i>	Expected May 2023
<i>Master of Science, Mathematics of Artificial Intelligence</i>	
<b>Bard College</b> <i>Annandale-On-Hudson, New York</i>	May 2021
<i>Bachelor of Arts, Mathematics Major</i>	<i>GPA 4.0</i>
<b>Bard College at Simon's Rock</b> <i>Great Barrington, Massachusetts</i>	May 2019
<i>Associate of Arts</i>	<i>GPA 3.9</i>
Mathematics and Computer Science Tutor	

## Work Experience

<b>Bard Summer Research Intensive</b>	Summers 2020, 2021
<i>Research Assistant, Mathematics</i>	
<ul style="list-style-type: none"><li>– Investigated the size of maximal generalized caps in finite affine spaces.</li><li>– Introduced other students in the research group to the material and supported their exploration of related problems.</li></ul>	
<b>Invisible College</b>	Summers 2019, 2020
<i>Research Assistant</i>	
<ul style="list-style-type: none"><li>– Designed and developed a set of decentralized synchronization protocols and algorithms.</li><li>– Co-authored IETF draft for universal synchronization protocol.</li><li>– Created Javascript and NodeJS tools to analyze and debug synchronization algorithms, including a universal protocol translation demo and a peer-to-peer sync visualization.</li><li>– Contributed to client and server code for the <a href="#">BraidJS</a> library.</li></ul>	
<b>Speakeasy Digital Media</b>	September 2018—December 2018
<i>Web Developer</i>	
<ul style="list-style-type: none"><li>– Created and modified WordPress PHP templates for company blogs.</li><li>– Improved page load times by up to ten times by optimization on both front-end page loading and back-end content generation.</li></ul>	
<b>Storefront Political</b>	May 2018—August 2018
<i>Data Science Intern</i>	
<ul style="list-style-type: none"><li>– Analyzed pre-electoral polls, including weighting, cross-tabulating, raking, and cleaning.</li><li>– Created R and Python scripts to automate common tasks such as matching ZIP codes to voting districts and visualizing survey results.</li><li>– Designed and implemented a webapp for interactive visualization of survey results.</li><li>– Managed large PostgreSQL databases containing voter information.</li></ul>	
<b>Qu-Swap (Hackathon project)</b>	December 2018—February 2019
<i>Front-end Developer</i>	
<ul style="list-style-type: none"><li>– Designed and implemented UI (JS, CSS, HTML, Bootstrap) and UX for a textbook-swap website.</li></ul>	