

# Rafie Walker

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## Education

<b>Bard College</b> <i>Annandale-On-Hudson, New York</i>	Expected 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>	Summer 2020
<i>Research Assistant, Mathematics</i>	

- Investigated the size of maximal generalized caps in finite affine spaces.
- Introduced other students in the research group to the material and supported their exploration of related problems.

<b>Invisible College</b>	Summers 2019, 2020
<i>Research Assistant</i>	

- Designed and developed a set of decentralized synchronization protocols and algorithms.
- Co-authored IETF draft for universal synchronization protocol.
- Created Javascript and NodeJS tools to analyze and debug synchronization algorithms, including a universal protocol translation demo and a peer-to-peer sync visualization.
- Contributed to client and server code for the [BraidJS](#) library.

<b>Speakeasy Digital Media</b>	August 2018—February 2019
<i>Web Developer</i>	

- Created and modified WordPress PHP templates for company blogs.
- Improved page load times by up to ten times by optimization on both front-end page loading and back-end content generation.

<b>Storefront Political</b>	May 2018—August 2018
<i>Data Science Intern</i>	

- Analyzed pre-electoral polls, including weighting, cross-tabulating, raking, and cleaning.
- Created R and Python scripts to automate common tasks such as matching ZIP codes to voting districts and visualizing survey results.
- Designed and implemented a webapp for interactive visualization of survey results.
- Managed large PostgreSQL databases containing voter information.

<b>Qu-Swap (Hackathon project)</b>	December 2018—February 2019
<i>Front-end Developer</i>	

- Designed and implemented UI (JS, CSS, HTML, Bootstrap) and UX for a textbook-swap website.

<b>Omnisparx</b>	November 2017—April 2018
<i>Intern</i>	

- Researched and reported on the state of blockchain technology to educate app users and inform development for blockchain start-up.