

# Rafie Walker

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## Education

**Bard College** *Annandale-On-Hudson, New York* Expected May 2021  
*Bachelor of Arts, Mathematics Concentration* GPA 4.0

**Bard College at Simon's Rock** *Great Barrington, Massachusetts* May 2019  
*Associate of Arts* GPA 3.9

- Algorithms and Data Structures
- Systems Programming
- Linear Algebra
- Vector Calculus
- Ordinary Differential Equations
- Modern Algebra
- Point-Set Topology
- Probability and Statistics

Mathematics and Computer Science Tutor

## Work Experience

**Invisible College** May 2019—August 2019  
May 2020—August 2020

*Research Assistant*

- 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.

**Qu-Swap** December 2018—February 2019

*Front-end Developer*

- Designed UI (JS, CSS, HTML, Bootstrap) and UX for a textbook-swap website.
- Set up TLS/SSL certificates on the back-end.

**Speakeasy Digital Media** August 2018—February 2019

*Web Developer*

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

**Storefront Political** May 2018—August 2018

*Data Science Intern*

- 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.

**Omnisparx** November 2017—April 2018

*Intern*

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