Gabriela Brown

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EDUCATION

University of Wisconsin-Madison 2023-Present
Ph.D. in Mathematics

The City College of New York 2021-2023
Masters of Science, Mathematics. *GPA:* 4.0.
Awards: Dr. Barnett and Jean Hollander Rich Mathematics Scholarship, for talented students who have demonstrated superior ability in mathematics.

Swarthmore College 2014-2018
Bachelor of Arts, Computer Science, Philosophy Minor. *GPA:* 3.8.
Awards: Edward Hanes Cooley '43 Endowed Scholarship, for academic merit in engineering.

Skills
Computers: Rust, C/C++, OCaml, HTML/CSS/JavaScript, Python, LaTeX
Languages: English (fluent), Spanish (proficient)

PUBLICATIONS

K. Finke, M. Kourakos M, **G. Brown**, et al. "Ancestral haplotype reconstruction in endogamous populations using identity-by-descent." PLOS Computational Biology 17(2): e1008638. (2021) https://doi.org/10.1371/journal.pcbi.1008638

RESEARCH EXPERIENCE

The City College of New York *Benjamin Steinberg* Summer 2022
Research in representation theory, on the paratrophic determinant of a commutative semigroup.

Swarthmore College *Sara Mathieson* Fall and Spring 2017-2018
Research in computational biology, algorithmically reconstructing old genomes from recent data.

TEACHING

The City College of New York Fall 2022
Tutor for the CCNY Math and Physics open tutoring center, covering college algebra and trig, calculus, probability, linear algebra, and differential equations.

ORGANIZATIONS

Gender Minorities in Math at Wisconsin (GMMAW) Fall 2023-Present
Organizer.

American Women in Mathematics Spring 2022-Spring 2023
Co-president of the CCNY's AWM chapter, and functional president of Math Club.

Women in Computer Science Fall 2015-Spring 2017
Co-president of Swarthmore's Women in Computer Science organization.

INDUSTRY EXPERIENCE

Software Engineer, Manta Networks   April 2021-December 2021
Full-stack engineer (Rust, Typescript) building dev tooling for the Manta Networks private decentralized crypto exchange. Responsible for understanding the protocol presented in the Manta technical white paper and translating the research implementation into a user-friendly interface.

Software Engineer, Commure   July 2018-August 2020
Full-stack engineer (Rust, Typescript, React, CockroachDB) at a start-up building a modern healthcare data stack off of the FHIR standard. I was an early engineer at the company taking the experimental stack to production with hundreds of doctors in several major healhtcare systems in the U.S. Specific projects I significantly contributed to include: building out backend infrastructure in Rust (generating static types and traits, middleware abstractions, API routing, operation parsing and implementation, external plugins), API robustness testing, and flexible data capture framework for patient inflow. Other responsibilities include: regular on call rotation, delploying software at new sites, interviewing prospective employees, and running several community resource groups.

Technical Writer, Freelance   November 2020-March 2021
Freelance technical writer for small tech start-ups. Projects included a 10 article series on systems design topics, technical documentation for product features, and how-to guides including github code samples.