

# Raven Rothkopf

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## EDUCATION

**Barnard College, Columbia University** | New York, NY | *BA Computer Science* Expected May 2024 |

Minor in Mathematics; Dean's List (Spring 2021, Fall 2021, Spring 2022, Fall 2022, Spring 2023) GPA: 3.73

- ★ **Relevant Coursework:** Data Structures and Algorithms in Java, Advanced Programming in C, Accessible User Interface Design, Analysis of Algorithms, Compilers, Type Theory, Program Synthesis, Calculus I through IV

## TECHNICAL SKILLS

Languages: Java, JavaScript, TypeScript, Python, C, C++, Rust, Haskell, OCaml, Accessible Web Dev (HTML, CSS)

Tools: Git, GitHub, Vim, Linux OS, Unity, LaTeX, Microsoft Office

## PROGRAMMING & RESEARCH EXPERIENCE

**Penrose, REUSE, Carnegie Mellon University** | Pittsburgh, PA | *SWE Research Assistant* | Summer 2023 - Present

- Develop [Rose](#), an EDSL for extensible, web-based automatic differentiation written in Rust and TypeScript for integration into [Penrose](#), a web-based, text-to-visual diagramming system
- Collaborate with Sam Estep, Dr. Joshua Sunshine and Dr. Keenan Crane
- Selected as one of 45 out of 1,000 students to participate in the National Science Foundation funded REU
- Published and presented findings at the International Conference on Software, Programming Languages, and Applications: Software for Humanity (SPLASH 2023 - Cascais, Portugal)

**Amazon** | Pittsburgh, PA | *SURE@CMU Fellow* | Summer 2023

- Selected as one of 13 researchers to visit Amazon's PA headquarters and participate in career-focused programming to learn about industrial software engineering research.

**Programming Languages Lab, Barnard College** | New York, NY | *Research Assistant* | Winter 2022 - Present

- Conduct novel research in reactive program synthesis to advance the accessibility of program synthesis and temporal logic specification languages. Provide guidance to peers as a temporal logic expert.
- Collaborate with Dr. Mark Santolucito
- Write thousands of lines of JavaScript, Haskell, and TypeScript code as part of a team across [multiple projects](#)
- Published and presented findings at the workshop for the Evaluation and Usability of Programming Languages and Tools (PLATEAU 2023 - Pittsburgh, PA)

**The Needle's Eye Academy** | Remote | *Web Developer* | Fall 2022 - Spring 2023

- Employed HTML, CSS, and JavaScript to code official website from scratch, published March 2023
- Synthesized information from The Needle's Eye Academy's current [LinkTree](#) to organize ideas into a seamless website for the nonprofit
- Met weekly for 1-hour sessions with collaborators to discuss deadlines and establish a common vision for the site

**Instructional Media and Technology Services, Barnard College** | New York, NY | *Assistant* | Fall 2021 - 2022

- Used web development skills to improve accessibility for [Barnard library](#), [IMATS](#), and [Media Center](#) websites
- Facilitated technological equipment reservations and checkouts for the broader Columbia University community

## LEADERSHIP & COMMUNITY INVOLVEMENT

**Computer Science Department, Barnard College** | New York, NY | *Student Liason* | September 2022 – Present

- Lead weekly [CS Social Hour](#) for Barnard students interested in CS to uplift women and gender minorities
- Deploy mentoring program to demystify challenges in CS such as getting into research, exploring fields in CS through introductory workshops, and applying to internships

**Chicago Raw** | Chicago, IL | *Assistant Manager* | Fall 2020 – 2021

- Generated over \$20k in sales for local raw [vegan restaurant](#). All tasks required strong interpersonal skills