



Madison Ramos

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EDUCATION

California Institute of Technology (Caltech)

Sept 2020 – Jun 2024

B.S. in Computer Science and Mathematics

Relevant Coursework: Programming (**Python**), Programming Methods [Data Structures] (**Java**), Software Design (**C**), ICPC (Competitive Programming), Discrete Mathematics, Multivariable Calculus, Linear Algebra

The Wheatley School — 3.98/4.00 GPA

Jun 2020

Regents Diploma with Advanced Designation with Honors

RESEARCH & WORK EXPERIENCE

Content/Graphic Design Intern — Novelly (Ed-tech Nonprofit)

Jun 2020 – present

- Designed graphics for Kickstarter launch using **Adobe Photoshop** and Canva
- Conducted **product research** and interviews to improve Novelly's SPEAK! Journals
- Advised a youth-led magazine and formed connections with organizations to promote current initiatives
- Reviewed entries from the SPEAK! Writing Contest and helped select winners for publication
- Acted as a youth member of the advisory board

Computer Science & Informatics Research Intern — Stony Brook University

Summer 2019

- Developed a preliminary decision tree algorithm using **Python**, **scikit-learn**, and **PyCharm** for mining relationship-based access control (ReBAC) policies from legacy access control lists (ACLs) in the Reliable Systems Lab
- Above algorithm **reduced runtime by 91–95%** while maintaining near-identical accuracy

SKILLS

Technical Languages	Java (Proficient), Python (Proficient), HTML/CSS/JavaScript (Familiar)
Tools	Git, scikit-learn, PyCharm, LaTeX
Languages	Portuguese (Fluent), French (Proficient, NYS Seal of Biliteracy)

ACTIVITIES

Youth Innovator — Youth 2 Innovator Program (Y2I)

Summer 2020

- 1 of 20 selected out of 97 applicants to participate in Headstream's Y2I
- Partially developed a 1-to-1 digital mentorship program that helps girls aged 10-14 learn to code

Board of Directors, Director of Communications — Kara Tutoring (Nonprofit)

Jan 2019 – *present*

- Connected over 170 international and domestic low-income students with a team of 100+ volunteer tutors
- Created logo and marketing graphics using Adobe Photoshop to promote the service on social media
- Tutored a rotating group of 5 international students for the SAT, IELTS, and AP Subject Exams

Volunteer Mentor, College Advisor — Fair Opportunity Project

Jun 2020 – *present*

- Guiding a first-generation student through the entire college application process, providing weekly mentorship

Director of Blogging — Girl Genius Magazine

Feb 2020 – Aug 2020

- Led the blogging team and collaborated with other teams to produce and promote STEAM content