

Sophia Zhu

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College and Career Goals

In university, I plan to major in computer science and/or mathematics. I hope to continue my education to a master's or PhD degree. My top career choices are researcher and software engineer.

Education

2019-2023 Irvington High School, Fremont, CA, USA 94538
4.0 unweighted GPA 4.32 weighted (with honors=4.5)

Tests

03/2022: SAT Reading & Writing: 790, Math: 800	03/2021: AIME: 6
02/2021: AMC 10: 103.5	2018: ABRSM grade 8 piano with Distinction
11/2021: AMC 12: 109.5	2019: ABRSM grade 8 violin with Merit

Awards / Honors

2021, 2022, 2023: American Invitational Mathematics Examination (AIME) qualifier.
2022: National Merit Scholarship semifinalist.
2019: New York Concert Festival Intl. Competition: Grand Prix winner, performed piano at Carnegie Hall.
2020: Science Olympiad Regionals: 1st, 5th, 6th places individually; 4th place team. Qualified for CA States.

Skills

Programming languages: Python, HTML/CSS, JavaScript, Java
Other programming: Bootstrap, Django, Git, GitHub
Scientific writing: LaTeX, Overleaf

Extracurricular Activities / Work Experience

Principia Science & Philosophy Magazine Club (11, 12)

Founder, co-president, author, editor

Published magazine, *Principia*, with 16 articles in 2 issues. <https://issuu.com/principia-magazine>

Started the magazine club, organized weekly meetings, delegated tasks, arranged for online publishing.
Coded a program to send auto-reminders about upcoming tasks from spreadsheets.
Facilitated editorial discussions.

Wrote a six-page article titled "What is Existence, Mathematically?" comparing constructivism with classical mathematics, describing different perspectives on the nature of mathematical objects, and summarizing major mathematical philosophies.

https://issuu.com/principia-magazine/docs/principia_issue_1_-_existence/6

Alan AI summer internship (12)

7-week internship with Alan AI (via Pilot City)

Developed a web app to create Google Calendar events from user voice input, using Alan AI voice recognition software and Django. Taught myself back-end web development.

Got a paid position from Pilot City afterwards.

Orchestra (9, 10, 11, 12)

Violin 1 in top ensembles of San Jose Youth Symphony (11, 12) and Fremont Youth Symphony Orchestra (9, 10)

Weekly rehearsals, concerts, summer camps, Europe tour. Violin section leader (10). SJYS Young Artist Competition finalist (11).

Irvington Coding Tomorrow Initiative (11, 12)

Director of Technology, instructor, session organizer (volunteer at nonprofit)

Held 8-week beginner coding courses for elementary-middle schoolers

Created curriculum, recruited teachers, managed registration, maintained website, and taught classes.

MathILy (11, 12)

5-week intensive summer math program (11), 12-week fall class (12)

Learn, discuss, solve/prove problems in: group theory, discrete geometry, combinatorics, graph theory, affine geometry, linear algebra, etc.

Science Olympiad (9, 12)

Irvington Team Azure member

Built model airplanes & musical instrument; decoded ciphers (9).

Build wifi antenna, force sensor, & mechanical timer; decode ciphers (12).

Paid piano teacher (10, 11, 12)

Teach weekly piano lessons via Zoom to a student at approximately ABRSM grades 2-3.

Debate Club (9, 10, 11)

Participated in novice, JV, and open/varsity parliamentary debates.

P2S Academy (10)

Volunteer reading comprehension tutor for a 5th grade student for 2 hours a week, 44 weeks, via Zoom.

Girls Who Code Club (9, 10)

Website lead (10). Maintained website, adding webpage for useful resources.

Chamber music (9, 11, 12)

Violinist in piano trio (11, 12). 2-week ChamberFest summer camp (9, 12).

Hackathons (11, 12)

Participate in various hackathons. Won Best Duo prize (11) for food waste education website.

Red Cross (11)

Blood Donor Ambassador: Receptionist for donors at blood drives. Volunteered for 25 hours.