Stephanie (Suni) Yao

stephanieyao@berkeley.edu | stephyao.com | Intended Major: Math / Math + CS

Education

University of California, Berkeley   Berkeley, CA · *Expected Grad: May 2029* · GPA: N/A

Candidate for bachelor's degree (BA) in Mathematics. Courses for 2025 Fall semester: CS61A, CS70, EECS16A, MATH 104 Intro to Analysis, MATH 191 Putnam Exam Workshop.

Shanghai Pinghe School   Shanghai, CN · *2022 - 2025*

- *Coursework*: IBDP Final Grade: 44/45 (7/7 in Math HL, Physics HL, Chemistry HL, Economics HL, English B HL; 6/7 in Chinese A SL; 3/3 in Extended Essay & Theory of Knowledge); 5/5 in self-studied Calculus BC, Physics C Mechanics, Physics C Electricity and Magnetism, CSA;
- President of math and physics clubs; Pinghe X-Program math courses lecturer; organizer of *Elenchus* Debate Competition 3.0; media department head for IronPulse 6941 and CarbonPulse 10541; PTV Studio photographer;
- *Outside*: initiated Shanghai International Math Circle | SIMaC; co-directed PHormula Math Contest.

Research Experience

Extracting Music Notes from Chords by Applying and Improving Fourier Transform   *2024*

Constructed a discrete frequency-magnitude matrices database for piano notes from direct FFT result, then implemented an additional algorithm after FFT to eliminate the overtones' disturbance in the chord.

Detailed Dandelion Spread Prediction Model Based on Wind Roses with Tianyi You, Xinyan Huang, Yuyang Wang   *2023*

Predicted the spread of dandelion based on various factors and wind roses to determine the possibility for the dandelion seeds landing in various spots; additionally concluded that dandelion possesses a relatively high invasiveness by quantification.

River water injecting into sea: Movement of sediments in stable stratified flows   *2023*

Quantified the effect of sediment-driven instability on the horizontal motion of sediment in a stably stratified fluid; experimented for cross-validation. Won CONF-CIAP 2024 Best Paper, published on Theoretical and Natural Science.

Academic Experience

Geometry Test Organizer, Berkeley Math Tournament   Berkeley, CA · *Aug 2025 - Present*

Fully responsible for the geometry test – including selecting, editing, and organizing problems, coordinating with problem writers to ensure quality, difficulty balance, and clarity; in charge of full test construction and test-solving process.

Teaching Assistant, AwesomeMath Summer Program   Remote · *Summer 2025*

AwesomeMath leads a three-week intensive virtual summer camp for mathematically gifted students from around the globe. As teaching assistant I led problem-solving sessions, grade problem sets, and help test-solve the exams over weekends; also audited Level 4 Advanced Number Theory.

Junior Counselor, First Year, Ross Mathematics Program   Terre Haute, IN · *Summer 2023, 2024*

Was selected as one of 16 junior counselors from 4000+ applicants in 2024; led recitations and graded homework; conducted number theory research.

Problem Writer, INTEGIRLS Math Competition   Remote · *Apr 2024 - May 2025*

Wrote 10+ problems; did test-solving; currently managing global chapter (Shanghai) for 2024-25 INTEGIRLS competitions with 7k+ participants and 30+ chapters.

Skills

- **Technical Skills**: React.js, Next.js, LaTeX, C++, GitHub/project management, Machine Learning, Python, Java
- **Languages**: English & Chinese (native)

Honors/Awards

- Jane Street WiSE NYC Participant (2025)
- PAIR & ESPR Camper (2025, 2024)
- Non-Trivial Research Fellow (2025)
- FIRST Robotics Halic Regional Champion (2025), Istanbul Regional 2nd Place (2025), Istanbul Regional Champion (2024), China Playoff-Season Champion (2023).
- USA Math Olympiad Qualifier (2023, 2024)
- High School Math Contest in Modeling Finalist (2023)
- American Regional Math League Global Top 10 (2023)
- British Physics Olympiad Global Top Gold (2023)

Projects

- ⚠ Opal: an Obsidian plugin powered by AI to help you construct a better second brain.
- 🔖 prime-hunt: a daily game inspired by word hunt but searching for prime numbers instead of words.
- 🔖 math-kitten: a web app to sharpen your algebra skills with cute kitten figures.
- 🔖 PathTogether : create private map session for friends to record their location and stay connected after working together, whether as classmate or alumni, co-campers or online friends in the same server.
- 🔖 DailyCode: a web app to push daily open coding challenges to users to ignite their passion for coding and help them build a habit of coding practice.