

Fiona Fei

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EDUCATION

Sage Hill School | Newport Coast, California | GPA: 4.0/4.0 | 2023.09 – Present

- **Sophomore Courses:** Multivariable Calculus, AP World History, AP Physics I, Spanish II, Honors Biology, English II: World Literature
 - **Junior Courses:** Linear Algebra, AP U.S. History, AP Physics C: Electricity and Magnetism, AP Biology, Honors English III: American Literature, Honors Spanish III
 - **Standardized Tests:** ACT:36
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EXTRACURRICULAR EXPERIENCE

Logic Path Math | Founder | 2024 – Present

- Founded a student-led nonprofit organization designing exciting, non-school related math curricula (e.g., graph theory, knot theory) for 5th–8th graders.
- Develop lessons highlighting creativity, logic, and real-world applications of mathematics.

AMPA Initiative | Volunteer | 2025 – Present

- Lead interactive math and word-based activities for senior citizens in retirement homes.
- Support cognitive engagement while building meaningful intergenerational connections.

Singing & Cosplay Content Creator | 2023 – Present

- Built a combined audience of 20,000+ followers across Instagram, TikTok, and RedNote.
- Create content blending music and cosplay to engage a global audience.

Summer at UChicago Pre-College Program: “Proof-Based Discrete Mathematics” | 2024.07 – 2024.08

- Explored higher-level mathematical argumentation and proof, uncovering the reasoning behind mathematics.
- Studied advanced topics like set theory, basic set operations, paradoxes of infinity, and countability and uncountability, holding discussions in small groups

Brown Pre-College Program: “Origins of the Universe: From the Big Bang to Black Holes” | 2025.07 – 2025.08

- Explored theories explaining the very beginning of the universe, the universe’s past and present, and what the future may hold.
 - Combined math and physics to develop explanations for the universe’s properties of all scales: from the big bang to the galaxies.
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RESEARCH EXPERIENCE

“Comparative Forecasting of International Air Passenger Demand: Exponential Smoothing vs. ARIMA Models” | 2025.11 – 2026.01

- Published “*Comparative Forecasting of International Air Passenger Demand: Exponential Smoothing vs. ARIMA Models*” on Advances in Economics, Management and Political Sciences (AEMPS).

“Time Series Analysis: UK Hospital Admission Rate Due to Influenza” | 2025.11 – 2026.01

- Used ETS model analysis and forecasting on R studio to analyze and predict the hospitality rate of influenza patients in the UK from 2017-2023
 - Collaborated with a group of graduate and undergraduate students around the globe to produce an official paper.
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LEADERSHIP & ACTIVITIES

Sage Hill School Anime & Cosplay Club | Co-Founder | 2025 – Present

- Built one of the school’s largest clubs (160+ members in a 600-student body).
- Organized weekly anime screenings, cosplay events, and community-building activities.
- Promote cultural awareness through holding all school seminars and open sessions, creating an inclusive, nonjudgmental environment.

Sage Hill American Rocketry Team | Math Director & Lead Treasurer | 2024 – Present

- Led mathematical modeling and calculations for competition rockets (TARC).
- Responsible for designing, 3D modeling, construction, and test launches.
- Managed team finances and budgeting.

Sage Hill Math Field Day | Student leader & Volunteer Organizer | 2025 – Present

- Designed five sets of competition problems and ran a 6-hour math competition for 125 students from 15 schools
 - Developed problems across algebra, geometry, number theory, and engineering challenges.
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HONORS & AWARDS

- **Honor Roll of Distinction**–AMC10 2023
 - **Honor Roll of Distinction, Jane Street Award**–AMC12 2024
 - **Honor Roll of Distinction**– AMC12 2025
 - **AIME II 2024** – Score: 8
 - **Physics Bowl 2024** – Score: 32
 - **Sing! China LA 2023** – Final Award Recipient
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SKILLS

- **Languages:** English (Fluent), Mandarin (Fluent), Spanish (Limited Working Proficiency).
- **Interests:** Women’s Studies, Sociology, Applied Math, Physics, Mathematics