

Tia S Ghoshal

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EDUCATION

Basis Independent Fremont: *Grade 12* (Weighted GPA: 4.71/5.00, Unweighted GPA: 3.99/4.00) **2019-Present**
Standardized Testing: SAT: 1560 (760 RW, 800 Math), PSAT (National Merit Scholarship Semifinalist): 1500 (740 RW, 760 Math)
Coursework: 13 APs including Calculus BC, Statistics, CS A, Biology, Chemistry, US Gov, US History, Economics
Capstone Courses: Neuroscience, Drug Discovery & Development, Multivariable/Vector Calculus, Linguistics

SKILLS AND CERTIFICATIONS

Languages: English (native proficiency), French (intermediate)

Programming Languages: Python, Java, JavaScript, HTML

Adult and Pediatric First Aid/CPR/AED Certification, American Red Cross. Certificate ID: 01RP5BV

Lifeguard Certifications (ID: 1200-6220) from Ellis & Associates: Supplemental Oxygen Support (ID:1200-6224), Preventing Bloodborne and Airborne Pathogens (ID: 1200-6223), Health Care Provider Basic Life Support (ID: 1200-6221)

MISA Certifications: CPR, First Aid, Stop the Bleed, Teen Mental Health First Aid, Bloodborne Pathogens

HONORS AND AWARDS

British Biology Olympiad: Bronze (top 15%) in 2024, Silver (top 10%) in 2025 and 2026.

USABO: Top 20% in 2024, Top 30% in 2025.

Econ Club: 3rd place at National Personal Finance Challenge States 2026, 3rd place in Financial Advisors' Contest 2025.

DECA: Qualified multiple times for International Conference (ICDC), won 6th in 2026, multiple state and regional level awards.

Le Grand Concours (National French Contest): Gold Medal (top 5%) in 2024 and 2025, Silver Medal (top 15%) in 2026.

Morehead-Cain Scholarship candidate: (1 of 2 across BASIS Schools network in 2026)

RESEARCH EXPERIENCE

Aspiring Scholars Directed Research Program: *Student Researcher* **2024-Present**

- Project involving testing a novel analog of Andrographolide to evaluate potential as an anti-cancer drug.
- Solely completed PBPK computational modeling to evaluate drug impact in humans.
- Preprint published (doi.org/10.20944/preprints202609.2044.v1), Peer review for NHSJS in progress.

Salk Institute for Biological Studies: *Research Intern* **2025-Present**

- Used a database of mouse visual cortex neurons to predict frequency of specific neural connections in Layer 5 of the brain to help with future studies on neurodegenerative diseases.
- Wrote 18+ Python scripts, 3300+ lines of code to analyze MICrONS dataset with 200k cells and 523 million synapses.
- Created graphs analyzing correlation of synapse size, connected cells, 3D and z-coordinate distance, and other variables.
- Third author on manuscript submitted to Nature; only high school student on the project.
- Regeneron STS competition submission currently in progress.

EXTRACURRICULARS AND VOLUNTEERING

BIF Econ Club: *Founder and President* **2023-Present**

- Creating and organizing study materials to prepare students for competitions: Wharton Investment Challenge, National Economics Challenge (NEC), and the National Personal Finance Challenge (NPFC).

Finlight (<http://www.projectfinlight.com>): *Project Manager and Lead* **2024-Present**

- Teach students basic financial literacy concepts through in-person events, guest speaker, YouTube videos.
- Outreach to 125+ students online and 25% of BASIS Independent Fremont students.

HS Programs (hsprograms.com): *Founder and Developer* **2025-Present**

- Search Tool for High School Programs, 2200+ programs, adopted by BASIS Independent School Network (Across 12 schools).

SNAPKids: *Volunteer Swim Teacher* **2025-Present**

- Help disabled children swim and feel more comfortable in the water. Led a fundraiser and raised \$1k+ for the program.

Fremont LEAF and Urban Forest Friends (UFF) : *Volunteer/Tree Leader* **2025-Present**

- Lead groups of volunteers in Newark and Fremont city to plant trees with UFF and plant care at the LEAF Urban Farm.

ACS Chemistry Club: *Middle School Lead & Lecturer* **2025-Present**

- Coach middle school students for the 'You Be the Solution' competition. 4 students won at the CA State level.