Sophia Sunkin

sophiasunkin@gmail.com

https://sophiasunkin.com

SKILLS/ACHIEVEMENTS

- All A student taking most rigorous AP/IB/college courses at high school and community college
- Interdisciplinary math and science enthusiast who learns beyond school borders
- Driven leader advocating for girls in STEM
- Active community service volunteer
- Award-winning visual artist
- Creative composer and pianist; solo pianist for school orchestra

RESEARCH & PUBLICATION

Intern at Air Force Research Laboratory (June-August, 2020)

- Publication: Henderson, Hack, Sunkin, Lovell, Hess, and Wightman, "Initial Relative-Orbit Determination of Space Objects via Radio Frequency Signal Localization," AAS Paper 20-696, presented at the AAS/AIAA Astrodynamics Specialist Conference (Virtual), August 9-13, 2020
- Conduct research under the mentorship of Dr. Alan Lovell to solve unknown satellite orbits utilizing TDOA (time difference of arrival) method
- Utilize MATLAB to simulate mathematical models and solve for unknown parameters in multivariable polynomials

Research at University of California at Irvine (Ongoing, Started in June 2020)

- <u>Research SARS-CoV-2 virus RdRp structure</u> under the mentorship of Professor Jin Yu to understand blocking mechanism of treatments such as Remdesivir
- Utilize Pymol and AutoDock to simulate protein structures and interaction
- Research current worldwide science studies in Coronavirus

ACADEMICS

- Weighted GPA: **4.9**; Unweighted GPA: **4.0**
- AP/IB and College Level Courses (current and completed):
 - Multivariable Calculus*Linear Algebra*Physics CIB Physics 2Human GeographyUS HistoryEnvironmental Sci.English LanguageEnglish 4Civics/Gov.IB Music CompositionStudio Art

Calculus BC Computer Science World History English Literature Foreign Language(Chinese)*

- Honors courses:
- Biology Chemistry Algebra II Geometry *College courses, not given weighted GPA credit by my high school

PROGRAMMING & SOFTWARE SKILLS

- Javascript, Python, MATLAB, PyMOL, AutoDock

COMPETITIONS

- Science Olympiad (2019, 2020)
 - Highest scoring team from Mission Viejo High School 2019
- Regeneron International Science and Engineering Fair (2021)

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LEADERSHIP

- Founder and President, Girls for STEM Club <u>https://girls4stem.club</u>
 - Promote STEM among girls and help both girls and boys explore STEM
 - Invite women leaders in science to speak to students on campus about various STEM careers and unique challenges facing women. Secured speakers include business leaders from Bio-Rad, biochemistry professor from University of California Irvine, biology professor from CalTech, Principal in IT Consulting from DXC Technology, and UCI MIND scholars panel.
 - Lead team members in promoting events on campus and coordinate event logistics.
- President (2020-2021) and Secretary (2019-2020), Science Olympiad Club
 - Lead club meetings and research study sessions
 - Recruit club members
- Publicity leader, Gay Straight Alliance Club (2019-2021)
 - Promote and coordinate upcoming meetings and events via social media
- Peer Counselor & Secretary (2020) in Peer Counseling Club
 - Counseling students on emotional health and relational matters

HONORS/AWARDS

- Gold Key Award, Scholastic Art & Writing Award Drawing (2020)
- Certificate of Award, International Piano Composition Competition
- AP Scholar With Distinction (2020), AP Scholar Award (2019)
- Coastline Regional Occupational Program Distinguished Student (2020)
- Diablo Excellence Award (2020)
- California Scholars Federation (2019, 2020, 2021)
- National Honors Society (2020, 2021)

SERVICES/OTHER CLUB ACTIVITIES

- Member of California Scholars Federation
 - Community service
- Member of National Honors Society
 - Student tutor
 - Community service events
- Music performer at local senior center
- Art class volunteer at local library

MUSIC & COMPOSITION

- Composed two solo pieces, copyright pending (#1-947128501)
- Piano soloist at MVHS orchestra

ART

- Scholastic Art Award Gold Key (2020)
- Muse Magazine Art Award First Place (2016)
- See portfolio at <u>https://sophiasunkin.com/art-portfolio</u>