

EXPERIENCE

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Undergraduate Researcher at Rob Phillips Lab 2022:

- Worked on microtubule and kinesin motor active matter systems.
- Developed mathematical models and performed Monte Carlo simulations to understand the self-assembling behavior

Undergraduate Researcher at David Hitlin & Frank Porter Lab 2023:

- Contributed to the Mu2E experiment aiming to detect charged lepton flavor violation.
- Showed new generation of silicon photomultiplier devices increased data acquisition rate through Monte Carlo simulation and data analysis (C++ and Python)

Undergraduate Researcher at David Hitlin & Frank Porter Lab 2024:

- Contributed to the LDMX experiment searching for hidden sector dark matter.
- Found improvements in the light yield of the scintillator bars to be used in the calorimeter through lab measurements and simulation.

Teaching Assistant: Physics Laboratory (Ph6) (Caltech) 2024:

- Assisted students with gathering data from complex equipment and statistical analysis

Teaching Assistant: Principles of Biology (Bi1) (Caltech) 2023/2024:

- Assisted students with combinatorics, statistics, and Python programming necessary for a challenging introductory course in Biology for two consecutive years.

Intern Engineer at Springboard Pro 2020-2021:

- Prototyped a new generation of surgical probes that use electromagnetic induction to detect metallic markers placed next to tumors.

EDUCATION

Level	School	Major	Class	Cumulative GPA
Undergraduate	California Institute of Technology	Physics with Computer Science (minor)	2025	4.0/4.3
Subject:	Relevant Courses:			
Physics	Relativistic Quantum Field Theory (grad), Quantum Computation (grad), Quantum Mechanics, Classical/Statistical Mechanics, Electromagnetism			
Computer Science	Decidability and Tractability, Design and Analysis of Algorithms, Computing Systems			
Math	Complex Analysis, Calculus, Differential Equations, Linear Algebra, Statistics			

HONORS & AWARDS

Brewer Prize Winner 2022 (Caltech):

- Awarded to student who provides the most creative solutions to the Physics 11 hurdles
- 2022 hurdles included finding the probability of catching COVID19 on a plane, and the optimum parking arrangement at a strip mall. Award included a paid research fellowship for the summer of 2022

British Physics Olympiad (BPhO) Experimental Project Competition Winner 2019:

- Member of national winning team. Project consisted of measuring and modelling the angles made by soap films.

SKILLS

Research, Data Analysis, Statistics, C++, Python, Java