

# CHRIS SUN

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## Education

### Harvard University

A.B IN CHEMICAL AND PHYSICAL BIOLOGY, SECONDARY IN COMPUTER SCIENCE

- **Cumulative GPA:** 3.89 | **SAT:** 2400 | **MCAT:** 523
- **Honors and Awards:** John Harvard Scholar '19-'20

Cambridge, Massachusetts

Aug. 2017 - May 2021

## Experience

### Harvard Physics Dept.

HEAD LAB TEACHING ASSISTANT: PS 3: ELECTRICITY AND MAGNETISM

- Helped design curriculum for laboratory sections, blending computational approaches in Python alongside traditional lab material.
- Taught three lab sections of twenty students biweekly exploring concepts from lecture.
- Provided support for students regarding class content or laboratory during office hours.

Cambridge, Massachusetts

Jan. 2022 - May 2022

### Harvard Dept. of Biological Chemistry and Molecular Pharmacology

RESEARCH ASSOCIATE: HARRISON LAB

- Built data refinement pipeline for automated first-pass structural reconstruction of cryogenic electron microscopy data using machine learning and computer vision techniques.
- Improving in-house sequence-to-structure methods scaffolding upon recent advancement in algorithms such as Google's AlphaFold.
- Exploring ramifications of immune first-exposure by performing clonal lineage analysis on influenza strain sequences

Boston, Massachusetts

Sept. 2022 - July 2023

### Harvard Physics Dept.

TEACHING ASSISTANT: PS 2: MECHANICS

- Taught four lab sections of twenty students biweekly exploring concepts using experiments alongside Python based modules.
- Provided support for students regarding class content or laboratory during office hours.

Cambridge, Massachusetts

Sept. 2021 - Dec. 2021

### Harvard Physics Dept.

COURSE ASSISTANT: PS 3: ELECTRICITY AND MAGNETISM

- Taught a discussion section of eight students weekly, reinforcing concepts touched on in lectures.
- Provided support for students regarding class content or laboratory during office hours.

Cambridge, Massachusetts

Jan. 2021 - May 2021

### Harvard Molecular and Cellular Biology Dept.

FACILITATOR: MCB 60: CELLULAR BIOLOGY AND MOLECULAR MEDICINE

- Lead live weekly lecture viewing sessions, guiding discussions about experimental or conceptual problems.
- Provided support for students regarding class content or laboratory procedure during office hours.

Cambridge, Massachusetts

Sept. 2020 - Dec. 2020

### Harvard School of Engineering & Applied Sciences

RESEARCH ASSISTANT: HEKSTRA LAB

- Thesis: "Evaluation of Molecular Dynamics-based Modeling for Electric Field-Stimulated X-Ray Crystallography"
- Built an easily customizable framework for creating and analyzing electric-field stimulated molecules models using Python.
- Benchmarked results from prior electric-field stimulated crystallography experiments against the model to identify discrepancies in simulation parameters using logistic neural networks.

Cambridge, Massachusetts

Dec. 2019 - Sep. 2021

### Massachusetts General Hospital

RESEARCH ASSISTANT: GALLOWAY LAB

- Identified progenitor cells involved in pathways regulating tendon/ligament specification and development in zebrafish models.
- Investigated possible tendon/ligament tissue inducers using high-throughput chemical screens on human iPSC and zebrafish embryo cells.

Boston, Massachusetts

Jan. 2019 - Feb. 2020

### SANY Group

NON-PROFIT INCUBATOR INTERN

- Analyzed the effectiveness of an on-going educational support program for rural students using regression models in R.
- Expanded online engagement by cleaning up existing company blogs and branching into new social media spaces platforms.

Beijing, China

Jul. 2016 - Aug. 2016

## Publications

2022

- Walsh RM Jr, Mayer ML, Sun CH, Rawson S, Nair R, Sterling SM, Li Z. Practices for running a research-oriented shared cryo-EM facility. Front Mol Biosci.

## Leadership and Activities

## Harvard Taiwanese Cultural Society

Cambridge, Massachusetts

PRESIDENT, DESIGN-CHAIR, SOCIAL-CHAIR

Oct. 2018 - Present

- Design programming such as speaker events, documentary screenings, cooking workshops, etc. to bring awareness of Taiwanese culture and politics to the greater Harvard/Cambridge community.
- Engaged in community-building among both international and next-generational students through mentorship and social events.

## PBHA's Chinatown Afterschool Program

Chinatown, Massachusetts

GRADE COORDINATOR

Sep. 2018 - Present

- Tutor as well as facilitate educational projects and workshops each week for grade-school kids in Boston's less-affluent Chinatown district.
- Coordinate with student volunteers weekly to maintain consistency in classroom guidelines, events, and expectations.
- Build weekly roadmaps for grade-wide project ideas to ensure that programming is both engaging and well-thought-out.

## Eliot Residential House Committee

Cambridge, Massachusetts

STEIN CHAIR

Dec. 2019 - Present

- Crafted house-wide events to create communal events and spaces for students and house tutors, such as weekly stein-nights, card writing stations, karaoke events, house formals, etc.

## Skills

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- **Technical:** Scientific Python (numpy, pandas, sklearn, keras, tensorflow), R, SQL, C+, Node.js, JavaScript, HTML
- **Strengths:** Leadership, Data Analysis, Problem-Solving, Communication
- **Interests:** Digital Art, Tennis, Cello, Visual Design