

# SUNDEEP CHAKLADAR

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## EDUCATION

### Washington University School of Medicine

MD Candidate | Distinguished Student Scholar  
Expected Graduation: May 2028

St. Louis, MO  
Aug 2024-Present

### Massachusetts Institute of Technology

B.S. in Biology, Minor in Science, Technology, & Society  
GPA: 4.9/5.0 | Honors: Phi Beta Kappa

Cambridge, MA  
Aug 2020-May 2024

## RESEARCH EXPERIENCE

### Lourido Lab, Whitehead Institute for Biomedical Research, Undergraduate Researcher

Advisors: Dr. Sebastian Lourido, Dr. Haley Licon, Dr. Aditi Shukla  
Built machine learning based, microscopy image analysis pipelines to characterize toxoplasma gondii's kinome, motility, and life cycle

Cambridge, MA  
Aug 2020-May 2024

### Massachusetts General Hospital, Psychiatry Clinical Research Intern

Advisors: Dr. Cheryl Yunn Shee, Dr. Jacqueline Clauss  
Performed chart abstraction and designed a geocoding algorithm to identify Boston neighborhoods that required more comprehensive access to mental health clinicians

Boston, MA  
Jan-Mar 2024

### Brigham and Women's Hospital, Data Science and Medical Research Intern

Advisor: Dr. Christopher Baugh  
Performed medical record analysis and chart abstraction to identify how to efficiently triage febrile cancer patients presenting to the emergency department

Boston, MA  
May-Sept 2023

### Kellis Lab, MIT Computer Science and Artificial Intelligence, Undergraduate Researcher

Advisors: Dr. Manolis Kellis, Dr. Lei Hou  
Developed machine learning models to predict the effects and progression of disease-induced inflammation across various patient populations

Cambridge, MA  
Aug 2022-Aug 2023

### Division of Infectious Diseases, Lundquist Institute, Summer Research Fellow

Advisor: Dr. Priya Uppuluri  
Created a presentation and literature review regarding the morphology, invasion, and pathogenesis of the SARS-CoV-2 virus

Torrance, CA  
June-Aug 2020

## WORK EXPERIENCE

### MassHealth, Clinical Research Intern

Investigated and contributed to proposals aimed at decreasing health disparities and expanding healthcare access to Massachusetts' undocumented population

Boston, MA  
May-Sept 2023

### Maine Department of Health and Human Services, Data Analytics Intern

Applied computational methods to analyze the effects of MaineCare on the accessibility of providers, health insurance, and affordable medical aid

Augusta, ME  
Jan-April 2023

### UCSF Accelerated Digital Clinical Ecosystem, Fellow, Senior Fellow

Led group focused on connecting with digital health companies and integrating their operations into a collaborative workspace for digital software tools

San Francisco, CA  
Aug-Nov 2022  
Jan-May 2024

### Wealth for Health, Intern

Collaborated with physicians and dieticians to improve the efficiency and automation of the digital health company's virtual interface and data analytics

Wichita, KS  
July-Oct 2022

## **TEACHING AND MENTORING**

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<b>MIT Biology, Teaching Assistant: Introductory Biology</b> Reinforced student learning of material through hosting weekly group discussion sections, 1-on-1 meetings, informal assessments, and observations	Cambridge, MA 2022-2023
<b>MIT Undergraduate Residential Life, Resident Peer Mentor</b> Assisted first year undergraduates with scheduling classes, developing social networks, managing academic issues, and exploring campus programs	Cambridge, MA 2022-2024
<b>MIT Pre-Medical Society, Undergraduate Mentor</b> Provided first and second year undergraduates with advice on what classes to take and what medical-related opportunities and resources MIT offers	Cambridge, MA 2021-2024
<b>Discover Emergency Operations, Pre-Orientation Counselor</b> Introduced first year undergraduates to MIT Emergency Management's operations as well as those of police, fire, and ambulance stations across Cambridge and Boston	Cambridge, MA Summer 2022

## **LEADERSHIP AND ACTIVITIES**

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<b>MIT Emergency Medical Services, Scheduling Officer, Training Officer</b> Created weekly shift schedules to ensure the ambulance was fully staffed 24/7 Organized weekly training sessions to ensure members maintained certifications	Cambridge, MA 2022-2024
<b>MIT Office of Experiential Learning, Student Ambassador</b> Coordinated and publicized events to expose undergrads to the institute's experiential learning programs	Cambridge, MA 2022-2024
<b>MedLinks of MIT, Residential Director</b> Provided residents with first aid, OTC medications, and mental health support Ensure all MedLinks in the dorm are properly trained, equipped, and active	Cambridge, MA 2021-2024
<b>Biology Department DEI Committee, Undergraduate Representative</b> Spearhead efforts to make department resources accessible to all undergraduates Established annual research fairs which introduce students to biology research	Cambridge, MA 2021-2024
<b>American Red Cross Team and Network of MIT, Bone Marrow Drive Coordinator</b> Coordinated and publicize bone marrow drives in collaboration with Be the Match Volunteered at blood drives, CRP trainings, and donation drives across campus	Cambridge, MA 2021-2024
<b>Lean on Me, MIT Chapter, President</b> Managed the student support hotline, provided support and direction to other resources Acted on issues faced by supporters including technical problems and complex calls	Cambridge, MA 2021-2024
<b>MacGregor House, B-Entry Floor Chair</b> Coordinated entry-wide study breaks, managed entry funds, served as liaison between entry residents and the House Committee	Cambridge, MA 2020-2024
<b>MIT Varsity Men's Tennis, Team Member, Captain</b> Competed in individual and varsity team competitions throughout the Northeast	Cambridge, MA 2020-2024

## **CLINICAL EXPERIENCE**

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<b>MIT Emergency Medical Services, EMT-B</b>	Cambridge, MA
Leveraged knowledge of emergency medicine to assess, treat, and transport patients	Jan 2022-May 2024
<b>Ascension Via Christi St. Francis, Student Observer</b>	Wichita, KS
Shadowed neurosurgeons, orthopedic surgeons, emergency medicine physicians, hospitalists, and radiation oncologists during surgery, rounds, and consultations	Aug 2022
<b>Orthopaedic Institute for Children, Student Observer</b>	Los Angeles, CA
Shadowed pediatric orthopedic surgeons in the clinic and operating room	Sept 2019

## **TECHNICAL SKILLS**

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**Programming Languages:** R, SQL, Python, Java

**Pipelines:** RNA Sequencing Analysis, Image Analysis, Machine Learning

**Software:** Epic, ImageJ, Ilastik, CellProfiler

## **PUBLICATIONS**

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1. Licon H, Giuliano C, **Chakladar S**, Shallberg L, Waldman B, Hunter C, Lourido S. A positive feedback loop controls Toxoplasma chronic differentiation. *Nat Microbiol* 8, 889–904 (2023). <https://doi.org/10.1038/s41564-023-01358-2>
2. Chan AW, Broncel M, Haseley N, **Chakladar S**, Andree E, Herneisen AL, Shortt E, Treeck M, Lourido S. Analysis of CDPK1 targets identifies a trafficking adaptor complex that regulates microneme exocytosis in Toxoplasma. *eLife* 12:RP85654. <https://doi.org/10.7554/eLife.85654.1>

## **PRESENTATIONS**

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1. Novel Computational Approaches for the Study of Toxoplasma Gondii  
MIT Biology Undergraduate Research Symposium | 2 Feb 2023

## **AWARDS AND HONORS**

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<b>College Sports Communicators, Academic All American</b>	Cambridge, MA
Recognized for outstanding academic and athletic achievement	2023
<b>EMT of the Month</b>	Cambridge, MA
In recognition of outstanding patient care and overall commitment to service	2022, 2023
<b>NEWMAC All Conference Doubles Team</b>	Cambridge, MA
Awarded by conference coaches for having the best doubles record in the conference	2022
<b>Intercollegiate Tennis Association Scholar Athlete</b>	Cambridge, MA
Varsity athlete with a GPA above 3.5	2022, 2023, 2024
<b>PLTW Biomedical Science Certification</b>	Los Angeles, CA
Completed three years of specialized PLTW Biomedical Sciences classes	2019
<b>United States Tennis Association Sportsmanship Award</b>	Carson, CA
Awarded by referees and players for outstanding sportsmanship on and off the court	2018