

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

MIT Biology, Teaching Assistant: Introductory Biology Reinforced student learning of material through hosting weekly group discussion sections, 1-on-1 meetings, informal assessments, and observations	Cambridge, MA 2022-2023
MIT Undergraduate Residential Life, Resident Peer Mentor Assisted first year undergraduates with scheduling classes, developing social networks, managing academic issues, and exploring campus programs	Cambridge, MA 2022-2024
MIT Pre-Medical Society, Undergraduate Mentor 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
Discover Emergency Operations, Pre-Orientation Counselor 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

MIT Emergency Medical Services, Scheduling Officer, Training Officer 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
MIT Office of Experiential Learning, Student Ambassador Coordinated and publicized events to expose undergrads to the institute's experiential learning programs	Cambridge, MA 2022-2024
MedLinks of MIT, Residential Director 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
Biology Department DEI Committee, Undergraduate Representative Spearhead efforts to make department resources accessible to all undergraduates Established annual research fairs which introduce students to biology research	Cambridge, MA 2021-2024
American Red Cross Team and Network of MIT, Bone Marrow Drive Coordinator 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
Lean on Me, MIT Chapter, President 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
MacGregor House, B-Entry Floor Chair Coordinated entry-wide study breaks, managed entry funds, served as liaison between entry residents and the House Committee	Cambridge, MA 2020-2024
MIT Varsity Men's Tennis, Team Member, Captain Competed in individual and varsity team competitions throughout the Northeast	Cambridge, MA 2020-2024

CLINICAL EXPERIENCE

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

TECHNICAL SKILLS

Programming Languages: R, SQL, Python, Java

Pipelines: RNA Sequencing Analysis, Image Analysis, Machine Learning

Software: Epic, ImageJ, Ilastik, CellProfiler

PUBLICATIONS

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. eLife12:RP85654. <https://doi.org/10.7554/eLife.85654.1>

PRESENTATIONS

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

AWARDS AND HONORS

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