

Nitya Thakkar

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EDUCATION

STANFORD UNIVERSITY

Computer Science Ph.D. Candidate

Advisor: James Zou

Research Interests: AI for health, computational biology

Expected June 2028

BROWN UNIVERSITY

Bachelor of Science (Sc.B.) in Computer Science with Honors

GPA: 3.97/4.0, Magna Cum Laude

May 2023

PUBLICATIONS

- **Nitya Thakkar***, Suchen Zheng*, Hannah L Harris, Susanna Liu, Megan Zhang, Mark Gerstein, Erez Lieberman Aiden, M Jordan Rowley, William Stafford Noble, Gamze Gürsoy, Ritambhara Singh. Predicting A/B compartments from histone modifications using deep learning, *iScience*, 27(5), 2024.
- Sarah Alamdari, **Nitya Thakkar**, Rianne van den Berg, Neil Tenenholtz, Bob Strome, Alan Moses, Alex Xijie Lu, Nicolo Fusi, Ava Pardis Amini, Kevin K Yang. Protein generation with evolutionary diffusion: sequence is all you need, *bioRxiv*, 2023.

AWARDS

National Science Foundation Graduate Research Fellowship

April 2024

Stanford Graduate Fellowship

Sept 2023

Senior Prize in Computer Science

May 2023

- Recipient of the Brown University Senior Prize in Computer Science for excellence in academics and service to the department

CRA Outstanding Undergraduate Researcher Award - Honorable Mention

Jan 2022

RESEARCH EXPERIENCE

Zou Lab, Stanford University

Jan 2024 – Present

PhD Student

Singh Lab, Brown University

Jan 2020 – May 2023

Undergraduate Research Assistant

- Honors senior thesis: developed a graph convolutional neural network trained on gene expression data from patients with Glioblastoma to predict cell state energy and learn the underlying graph structure of the gene-gene interactions
- Co-first author on ENCODE Consortium project, CoRNN, to predict the three-dimensional organization of the genome (A/B compartments) from one-dimensional data (histone modification signals) using deep learning methods; accepted in ACM Conference on Bioinformatics, Computational Biology, and Health Informatics

Biomedical Machine Learning Group, Microsoft Research

May – August 2022

Undergraduate Research Intern

- Advised by Kevin Yang, Ava Amini, and Sarah Alamdari
- Contributed to the conceptualization, development, and analysis of EvoDiff, a diffusion framework for generating proteins from sequence information

Broad Institute of MIT and Harvard

June – August 2021

Undergraduate Research Intern

- Advised by Neriman Tokcan through the Broad Summer Research Program (BSRP)
- Designed an architecture to predict spatial cell interactions in Classical Hodgkin's Lymphoma from gene expression for personalized cancer therapy; presented work at the Annual Biomedical Research Conference for Minority Students in November 2021

TEACHING EXPERIENCE

Stanford University

March 2025 – Present

- Graduate student instructor for CS 227: Foundation Models for Healthcare
- Responsibilities included designing and grading assignments and holding weekly office hours

Brown University

Jan 2021 – May 2023

- Head Teaching Assistant for Deep Learning (Spring '23): led TA staff of 25 and oversaw all course development
- TA for Deep Learning (Fall '22 and Spring '22), Computer Systems (Fall '21), Linear Algebra (Spring '21)
- Responsibilities included course development, grading problem sets/projects, and holding weekly office hours

VOLUNTEERING

Stanford Future Advancers of Science and Technology

Sept 2024 – March 2025

- Mentored a small group of underrepresented high school students in San Jose biweekly by guiding them in developing and presenting an independent science project