

Nitya Thakkar

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Website

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EDUCATION

STANFORD UNIVERSITY, Ph.D. Candidate in Computer Science
Honors: Stanford Graduate Fellowship

Expected June 2028

BROWN UNIVERSITY, Sc.B. Computer Science with Honors, GPA: 3.97/4.0

May 2023

Honors: Magna Cum Laude, Senior Prize in Computer Science, CRA Outstanding Undergraduate Researcher Award
Honorable Mention (2022)

Relevant Coursework: Computational Biology, Machine Learning, Deep Learning, Learning with Limited Labeled Data (graduate seminar), Advanced Deep Learning (graduate seminar), Data Science, Computer Vision, Algorithms and Data Structures, Discrete Math, Multivariable Calculus, Statistical Inference, Linear Algebra, Genetics, Biochemistry

WORK EXPERIENCE

Teaching Assistant at 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

SELECT PROGRAMMING EXPERIENCE

- Othello: multiplayer game with AI opponent (Java; CS15; 2019)
- Shell: command terminal shell built in C (CS33; 2020)
- Implemented a graph convolutional network for single-cell classification (Python; CS1470; 2021)
- Full Stack at Brown: Created a website and implemented a database of users with login functionality (React, Node)

Languages: Proficient in Python, Java, C, PyTorch; Experience with HTML/CSS, JavaScript, React, and R

RESEARCH EXPERIENCE

Brown University, Computational Biology Lab

Jan. 2020 – May 2023

Dr. Ritambhara Singh

- 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 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

Microsoft Research, Biomedical ML Lab

May 2022 - August 2022

Dr. Kevin Yang

- Contributions during internship led to publication of EvoDiff, a diffusion framework for generating proteins from sequence information
- Assisted in project conceptualization, creation of generation models for 2D alignments, and analysis of the generations

Broad Institute of MIT and Harvard

June 2021 – Dec. 2021

Dr. Neriman Tokcan

- Created a novel architecture to predict spatial interactions among cells in the Classical Hodgkin's Lymphoma cellular microenvironment based on gene expression values for individualized cancer therapy treatments
- Presented work at Annual Biomedical Research Conference for Minority Students in November 2021

LEADERSHIP & VOLUNTEERING

Brown University Meiklejohn Peer Advisor and WiCS Mentor

Aug. 2021 – May 2023

- Meiklejohn: Academic and peer advisor to 6 first-year students at Brown
- WiCS: Advise and mentor first-year women in CS; assumed leadership in 2022

Brown Elementary Afterschool Mentoring

Jan. 2020 – May 2023

- Created weekly educational lesson plans for elementary school students at William D'Abate Community School

Brown Abhinaya: Bharatanatyam

Sept. 2019 – May 2023

- Co-captain (2021-22) and choreographer for Brown's premier South Asian classical dance team
- Professional production in high school, "Ritu - The Seasons": four major performances in Twin Cities (2016-18)