

Nitya Thakkar

69 Brown St, Box 9533
Providence, RI 02912
Website

(651) 242-0072
nitya.thakkar@brown.edu
LinkedIn

Education

Brown University, Sc.B. Computer Science, GPA: 4.0/4.0 **Providence, RI • May 2023**

Honors: CRA Outstanding Undergraduate Researcher Award Honorable Mention (2022)

Relevant Coursework: Computational Biology, Machine Learning, Deep Learning, Algorithms and Data Structures, Computer Systems, Discrete Math, Multivariable Calculus, Statistical Inference, Linear Algebra, Genetics, Organic Chemistry

St. Paul Academy and Summit School, GPA: 3.99/4.0

St. Paul, MN • June 2019

Honors: Cum Laude Society, Intel International Science and Engineering Fair Finalist (2019), Ethel E. Pease Award for excellence in mathematics (2019), National Merit Scholar, Target Women in Science and Technology EPIC Award (2018)

Work Experience

Teaching Assistant at Brown University **Jan. 2021 - Present**

- Deep Learning (Spring '22), Introduction to Computer Systems (Fall '21), Linear Algebra (Spring '21)
- Responsibilities include 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 (2020 - Present): Created a website using React (front-end) and Node + Express (back-end, implemented a database of users with login functionality)

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

Research Experience

Broad Institute of MIT and Harvard **June 2021 – Present**

Dr. Neriman Tokcan

- Applying machine learning methods to spatial transcriptomic data, goal is to understand how Classical Hodgkin's Lymphoma tumor cells survive based on interactions with nonmalignant immune cells in cancerous environment
- Created feed forward neural network with spatial context to identify cell types in tumor from gene expression data; implemented new spatial analysis methods (using Python and R)
- Presented work at Annual Biomedical Research Conference for Minority Students in November 2021

Brown University, Computational Biology Lab

Jan. 2020 – Present

Dr. Ritambhara Singh

- Co-first author on ENCODE Consortium project to predict three-dimensional organization of the genome (A/B compartments) from one-dimensional data (histone modification signals) using deep learning methods
- Created a recurrent neural network to predict 3D organization, ran and implemented baseline methods, and improved data pre-processing pipeline (using Python, R, and Git)
- Writing manuscript for submission to ISMB 2022 conference

Leadership & Volunteering

Meiklejohn Peer Advisor and WiCS Mentor

Aug. 2021 – Present

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

Brown Elementary After-school Mentoring

Jan. 2020 – Present

- Volunteer with and mentor K-5 students once a week at local elementary school

Brown Abhinaya: Bharatanatyam

Sept. 2019 – Present

- 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)

Journalism

Sept. 2019 – Present

- Staff writer for *The Brown Daily Herald*
- Editor-in-Chief of *Aureus*, feature magazine, and news editor for online publication, *RubicOnline* (2016-19)