

Nitya Thakkar

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Education

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

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, Ethel E. Pease Award for excellence in mathematics (2019), National Merit Scholar, AP Scholar, Rensselaer Medal (2018), Target Women in Science and Technology EPIC Award (2018)

Work Experience

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

- Linear Algebra (Spring '21), Introduction to Computer Systems (Fall '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)
- 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 JavaScript, React, HTML/CSS, and R

Research Experience

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

Dr. Neriman Tokcan

- Applying machine and deep learning methods to spatial transcriptomic data (using Python and R)
- Goal is to understand how Classical Hodgkin's Lymphoma tumor cells survive based on interactions with nonmalignant immune cells in cancerous environment
- Created fully connected neural network to identify cell types in tumor from gene expression data
- Project to be presented at Annual Biomedical Research Conference for Minority Students in early November

Brown University, Computational Biology Lab

Jan. 2020 – Present

Dr. Ritambhara Singh

- Co-author on project to predict three-dimensional organization of the genome (A/B compartments) from one-dimensional data using deep learning methods
- Created a recurrent neural network (RNN) to predict 3D organization (using 1D information about biological factors), ran and implemented baseline methods (using Python, R, and Git)
- Project is part of the ENCODE Consortium, currently writing manuscript for submission to ISMB 2022 conference in January

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)
- 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)