# Nitya Thakkar

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### Education

Brown University, Sc.B. Computer Science, GPA: 3.92/4.0

Providence, RI • May 2023

Relevant Coursework: Introduction to Object-Oriented Programming and Computer Science (CS15), Introduction to Algorithms and Data Structures (CS16), Introduction to Computer Systems (CS33), Multivariable Calculus (MATH180), Linear Algebra (MATH520)

St. Paul Academy and Summit School, GPA: 3.99/4.0, SAT: 1550, ACT: 35 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), 2017 MN Gold Bilingual Seal for ACTFL Intermediate-High Proficiency in Spanish

## Programming Experience

## Projects at Brown

Sept. 2019 - Present

- CS15: Created DoodleJump, Tetris and Othello (AI feature implemented using Minimax algorithm) games in Java
- CS16: Implemented Seamcarve algorithm, removing least important pixel "seams" from an image
- CS33: Implemented a Shell, the malloc, realloc, and free commands, and a database involving a TCP protocol, multi-threaded programming, and signal handling all in C

## Independent Study in High School

Jan. 2018 - Aug. 2018

- Designed an app in JavaScript and Android Studio to assist people with allergies when abroad
- Features: translations for at least 20 major countries of words and phrases, description on what to do if someone has an allergy attack, how to contact emergency officials, additional location tracker feature (used Google APIs)

**Programming Skills**: Proficient in Java, Python, & C; Experience with JavaScript, HTML/CSS, x86 Assembler Language, & R

## Research Experience

#### Brown University, Computational Biology Lab

Jan. 2020 - Present

Dr. Ritambhara Singh

- Co-author on project to predict interactions (A/B compartments) between genes using regression and classification algorithms (ex. linear regression, random forest model), project to be presented at the ENCODE project consortium
- Reproducing & expanding on results from various studies to derive compartments from Hi-C data (Python, R & Git)

#### University of Massachusetts - Amherst, Food Science Lab

July 2018 – Aug. 2018

Dr. Yeonhwa Park

- Determine the effects of Sulforaphane on aging, obesity and oxidative stress in Caenorhabditis elegans. Extensive data analysis using Statistical Analysis Software, GraphPad Prism, and SPSS
- Received awards for presentation & paper at Twin Cities Regional Science Fair and Minnesota State Science Fair (March 2019), qualified as a finalist for the Intel International Science and Engineering Fair (May 2019)

## University of Minnesota, Immunology Lab

June 2017 - Sept. 2017

Dr. Stephen Jameson

• Assisted a postdoctoral student with her research: studying killer cells of the adaptive immune system (CD8 T cells) and how to tweak the CD8 T cell response to generate a response against infections and cancer

#### Additional Involvements

## Brown Abhinaya

Journalism

Sept. 2019 – Present

Bharatanatyam: Classical Indian Dance

- Completed Arangetram, 2-hour long stage debut performance, in 2015
- Professional production in high school, "Ritu The Seasons": four major performances in Twin Cities (2016-18)

### **Brown Elementary After-school Mentoring**

Jan. 2020 - Present

• Volunteer with and mentor 2nd-grade students once a week at local elementary school

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Sept. 2016 – Present

- Staff writer for *The Brown Daily Herald* (2019 Present)
- Editor-in-Chief of Aureus, feature magazine, and news editor for online publication, RubicOnline (2016-19)