# Nitya Thakkar

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### Education

Brown University, Sc.B. Computer Science

Providence, RI • May 2023

Relevant Coursework: Introduction to Object-Oriented Programming and Computer Science (CS15), Introduction to Algorithms and Data Structures (CS16), 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

- Created DoodleJump, Tetris and Othello (AI feature implemented using Minimax algorithm) in Java through CS15
- Implemented Seamcarve algorithm, removing least important pixel "seams" from an image, in CS16

# 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; experience with JavaScript (Android Studio), HTML/CSS & R

# Research Experience

#### Brown University, Computational Biology Lab

Jan. 2020 - Present

Dr. Ritambhara Singh

- Conducting research at the intersection of Machine Learning and Biology
- Working on a project to predict interactions between genes using regression and classification algorithms (ex. linear regression, random forest models)
- Writing and running code in Python and R, using git
- Co-author on this project, to be presented at ENCODE project consortium

#### 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
- Received awards for presentation & paper at Twin Cities Regional Science Fair and Minnesota State Science Fair (March 2019), qualified as a finalist for the prestigious Intel International Science and Engineering Fair (May 2019)
- Extensive use of data analysis using Excel, Statistical Analysis Software (one-way ANOVA and chi-square test), GraphPad Prism (Logrank test) and SPSS

#### 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
- Ran PCR on mice blood, sorted data in a Flow Cytometer, analyzed data using Excel and comparative Ct method

## **Additional Involvements**

Bharatanatyam

2005 - Present

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)
- Dancer in Brown Abhinaya (2019 Present)

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

Jan. 2020 - Present

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

Journalism Sept. 2015 – 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)