

Usha Bhalla

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Education

Brown University

Sc.B. in Computer Science

Anticipated 05/2022

GPA 4.00/4.00

Relevant Coursework: Deep Learning, Computer Systems, UI/UX, Discrete Mathematics, Differential Equations, Algorithms/Data Structures, Statistical Inference, Linear Algebra

BASIS Chandler

High Honors Graduate

05/2018

GPA 4.00/4.00

Honors: National Merit Scholar, 2016 & 2017 AzSEF Award Winner; SAT: 1530 (800 Math, 730 R/W)

Work Experience

FoldIt – Rosetta Commons

05/2020 – 09/2020

NSF Research Intern

- Designed convolutional neural networks to create computer generated levels for the tutorial of FoldIt, a protein folding and design game, with funding from the National Science Foundation
- U. Bhalla, A. Sarkar, S. Cooper. “Application of Procedural Content Generation via Machine Learning to the Tutorial Levels of Foldit.” *RosettaCon 2020*.

Barrow Neurological Institute – Translation Bioimaging Lab

06/2019 – 10/2019

Intern

- Simulated MR scans of brain tumors using high-dimensional image data and determined optimal protocol for imaging metastases and lymphomas for future standardization
- N. Semmineh, U. Bhalla, C. Quarles, et al. “Analysis of Accuracy and Precision of Recommended Protocols for Dynamic Susceptibility Contrast MRI for Brain Metastases.” *ISMRM 2020*.

Brown Computer Science Department

06/2020 – Present

Head Teaching Assistant - CS0030

- Develop course structure and logistics with professors for CS0030 at Brown University
- Oversee undergraduate TAs, hold office hours, create website, and grade student coursework

Projects

AD Finder – An RNN-based deep learning model to predict Alzheimer’s from speech data

Sea Shell – A command terminal C shell that parses and performs commands, executes programs

Greetings – A Chrome extension to track and improve mental health and well-being

News Rank – Implementation of PageRank algorithm that filters for fake news

Sizable – Smart image resizing with dynamic programming

Extracurriculars

The Brown Daily Herald

09/2018 – Present

Head of Graphics + Data Visualization

- Head graphics and data visualization team for campus newspaper, conduct outreach and hiring
- Edit all graphics for publishing

Brown Abhinaya Bharatanatyam Dance Team

09/2018 – Present

Captain and Choreographer

- Choreograph and teach arrangements for biannual shows and competitions, head recruitment

Skills & Interests

Technical skills: Python, C, Java, TensorFlow, HTML/CSS/JS, MATLAB, Figma, Adobe Ps/Ai/Xd

Additional activities: Naik Proteomics Lab, WISE Student Mentor, Brown Design Workshop

Languages: Intermediate Spanish and Hindi Proficiency

Interests: Cooking shows, illustration, hiking the Grand Canyon