Usha Bhalla

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ushabhalla.github.io

EDUCATION

Brown University Anticipated May 2022
Bachelor of Science, Computer Science (Honors Track) GPA: 4.00
Relevant Coursework: Computer Vision, Deep Learning, Machine Learning, Artificial Intelligence, Computer Systems, Data Science, UI/UX, Discrete Mathematics, Statistical Inference, Linear Algebra, Physiology, Organic Chemistry

PUBLICATIONS

T. Yun, **U. Bhalla**, E. Pavlick, C. Sun. "Do Vision-Language Pretrained Models Learn Compositional Concepts?" *Under review.*

N. Semmineh*, **U. Bhalla***, L. Bell, A. Stokes, M. Lee, L. Hu, J.L. Boxerman, C. Quarles. "Analysis of Accuracy and Precision of Recommended Protocols for Dynamic Susceptibility Contrast MRI for Brain Metastases." *ISMRM 2020.*
** denotes equal contribution*

RESEARCH EXPERIENCE

Microsoft Research 06/2021 – Present
Undergraduate Research Intern
Developed a 4D-spatiotemporal neural network robust to domain shifts and limited data to identify memory recall of movie scenes using fMRI scans taken during watch time

Brown Visual Computing Group 05/2021 – Present
Undergraduate Honors Thesis
Pursuing an Honors Thesis with Professor Chen Sun on the topic of increasing model interpretability with limited supervision

REU - Rosetta Commons 05/2020 – 09/2020
REU Fellow
Designed convolutional deep learning model to create computer generated levels for the tutorial of FoldIt, a protein folding and design game

Barrow Neurological Institute 06/2019 – 10/2019
Undergraduate Research Intern, Translation Bioimaging Lab
Simulated MRI scans of brain tumors using high-dimensional data and determined optimal protocol for imaging metastases and lymphomas for future standardization

WORK EXPERIENCE

The Policy Lab 09/2020 - 12/2020
Data Science Intern
Analyzed the impacts of various states' COVID-19 data definitions regarding positivity, deaths, and race to improve the Rhode Island government's epidemic models

Embolden 06/2020 - 09/2020
Web Designer
Partnered with minority-owned, small businesses to adapt strategy and digitize services for remote operations

TEACHING

Head Teaching Assistant
CS1470 - Deep Learning Fall 2021
CS0030 - CS for Social Sciences Fall 2020
Developed course curricula and logistics, hired course staffs, and assisted 400+ students through labs and office hours

Undergraduate Teaching Assistant
CS0220 - Discrete Math and Probability Spring 2021
Held office hours, taught weekly lab sections, designed and maintained website, and graded student coursework

MENTORING

Women in Science & Engineering Mentor 09/2020 - Present
Provided mentorship, support, and advice to women and underrepresented minorities interested in STEM at Brown University

Women in Computer Science Mentor 09/2020 - Present
Advised and mentored first-year women in Computer Science to encourage diversity and inclusion in the Brown University CS Department and the tech industry

LEADERSHIP

Brown Daily Herald 09/2018 – Present
Editor of Graphics and Data Visualization
Led graphics and data visualization team for campus newspaper; conducted outreach and hiring

Brown Abhinaya Bharatanatyam Dance Team 09/2018 – Present
Captain and Choreographer
Choreographed and taught arrangements for biannual shows and competitions; headed recruitment

SKILLS & INTERESTS

Technical
Python, Java, C, Tensorflow, PyTorch, MATLAB, LATEX, HTML/CSS, JavaScript, Adobe CC

Languages
Hindi (Intermediate), Spanish (Intermediate)

Interests
Illustration, dance, hiking, animation, poetry