Nitish R. Dashora

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EDUCATION

UC Berkeley (College of Engineering), Berkeley, CA — August 2020 - May 2023
Undergraduate Student - B.S. in Electrical Engineering & Computer Science (EECS)
- Generation Change Merit Scholar, Leadership Awardee, Machine Learning @ Berkeley, Engineering Student Council, IEEE

The Ohio State University, Columbus, OH — May 2019 - April 2020
Dual-Enrollment Student from Olentangy Liberty High School - GPA: 4.0/4.0
- Relevant Courses: Calculus 3, Linear Algebra, Differential Equations, Discrete Math, Engineering Statistics, AI Studies
- National AP Scholar, National Merit Scholar, Biology Olympiad and Chemistry Olympiad Semifinalist, OSU HackAI Winner

Online Coursework — January 2015 - Present
Remote Student on Udacity, Coursera, and Codecademy
- Courses: Machine Learning with TensorFlow on Google Cloud 5-Course Specialization (Google), Deep Learning 5-Course Specialization (Dr. Andrew Ng), Deep Learning (Dr. Vincent Vanhoucke), Intro to Machine Learning (Dr. Sebastian Thrun)

RESEARCH EXPERIENCE

Robotic AI & Learning Lab at Berkeley Artificial Intelligence Research — August 2020 - Present
Undergraduate Researcher
- Researching ensemble-based deep imitation learning for off-road, ROS-based robotic navigation under Dr. Sergey Levine
- Developed a mid-level imitative planning model with NASA JPL which reduces mean future trajectory error by 35%
- Incorporated a new volumetric input with LIDAR to create an improved model for live service through ROS Node API

Translational Data Analytics Institute at The Ohio State University — August 2019 - April 2020
Natural Language Processing Research Assistant
- Worked under Dr. Raghu Machiraju to convert wet laboratory protocol text into machine-readable trees through self-attention models, abstract name-entity recognition, and cross-sentence relation extraction
- Created a biomedical language corpus through manual annotation to train our medical protocol translation system
- Helped to create new name-entity labels and a new partial temporal ordering schema for cross-sentence protocol trees

International Science and Engineering Fair — May 2019
Global Competition Finalist
- Developed a machine learning algorithm to perform segmentation of lesions in CT scans without mask labeled data
- Presented the results of my optimized algorithm at the Regional Ohio Junior Science and Humanities Symposium and the Ohio State Science Day following high-ranking performances at the local and North Central Ohio District level
- Selected as a finalist for Intel ISEF in Phoenix, AZ after receiving the Intel Computer Science Excellence Award, Mu Alpha Theta Mathematics Award, Best Computer Science Award, and Quantitative Biology Institute Award of Excellence

Ohio Supercomputer Center Summer Institute — June 2018 - July 2018
Summer Research Fellow
- Used MATLAB to conduct group research in motor protein simulations with stochastic differential equations
- Created kymographs with Dr. Anthony Brown and Dr. Chuan Xue at OSU to model protein migration with ImageJ
- Utilized the Owens Cluster, through LINUX, at the Ohio Supercomputer Center to run a distributed simulation job

PROGRAMMING EXPERIENCE

aBioBot — June 2019 - August 2020
Applied Robotics and AI Intern
- Increased our end-to-end REST-API video streaming framerate, with the use of WebSocket and cloud computing, by 75%
- Improved accuracy for our NodeJS object-detection model, through TensorFlow and asynchronous Python, by 50%
- Developed new JavaScript features on the UI for video stream options, upload tools, and colony-picking camera protocols

Discovery Lab - Global — June 2019 - August 2019
Software Development Intern
- Optimized step-time of a NumPy-based, AWS reinforcement learning network, with TensorFlow and Keras, by 12%
- Created a presentation for IEEE NAECON 2019 and achieved the “Top Student” award out of 75 undergraduate students
- Designed an AI lecture series for incoming students and gave presentations about the mathematical components of AI

LEADERSHIP AND COMMUNITY OUTREACH

Center of Science and Industry — June 2014 - June 2018
350 Hour Floor Faculty Volunteer
- Presented 13 different scientific experiments to public audiences as large as 100 people, and won a White Star Status
- Used the White Star Status to teach 20 incoming volunteers how to effectively present experiments to the public