

Nicole Sullivan

Email: nicolesullivanmarie@gmail.com Website: nicolesullivan.xyz Github: github.com/nmsulliv

Skills: C++, Python, Java, R, C, HTML, CSS, Javascript, PyTorch, Git, Docker

Interests: Artificial Intelligence, Machine Learning, Computational Sustainability, Human-Computer Interaction

Education

Ph.D. in Computer Science

Sep. 2022 - Present

University of Washington, Seattle, WA

B.S. in Computer Science

Aug. 2018 - May 2022

Howard University, Washington, D.C.

GPA: 4.0

Relevant Coursework: Applied Data Science, Intro to Machine Learning, Artificial Intelligence, Affective Computing, Linear Algebra, Discrete Structures, Fundamentals of Algorithms

Research Experience

Undergraduate Researcher

May. 2021 - Aug. 2021

Urban Innovation Group, Microsoft Research

- Created an interactive dataset visualization tool with R to enable environmental justice community groups to explore air quality concerns in their community
- Found and fused open-source datasets to provide more context surrounding air quality data

Undergraduate Researcher

Jan. 2021 - May 2021

CDS Undergraduate Research Program, New York University

- Trained Gaussian Processes and Neural Networks to reduce uncertainty in sea level forecasts
- Compared spatiotemporal sea level extrapolations between two Gaussian Process kernels- the spectral mixture kernel and radial basis function kernel

Undergraduate Researcher

Oct. 2020 - May 2021

Social and Technological Action Research Group, University of California - Irvine

- Conducted a content analysis of university websites in order to design a sustainable solution for improving college campus digital mental health support
- Created interview questions that explore culturally relevant mental health services for students and counselors

Undergraduate Researcher

Sep. 2019 - May 2021

Affective Biometrics Lab, Howard University

- Prototyped an Augmented Reality platform, Bison Hacks the Yard, to create culturally relevant computer science pedagogy for underrepresented university students
- Analyzed survey data to create data structure questions that will improve fundamental CS skills for undergraduate students

Industry Experience

System Engineering Intern

May 2022 - Aug. 2022

IBM

- Ported the natural language processing and vision classification MLPerf inference benchmarks over to IBM's Z16 system
- Used MLPerf to benchmark Z16 system's performance on machine learning inference tasks
- Helped the IBM Z AI performance team determine whether to continue using the MLPerf benchmark or create a new benchmark

Student Training in Engineering Program Intern

May 2020 - Aug. 2020

Google Inc.

- Developed a web application, UniteBySTEP, to simplify the sharing of events relating to social good for Black Lives Matter protests
- Managed the processing and storage of data objects with the App Engine Datastore API
- Designed and implemented voice-to-text features to increase user accessibility for low-vision users

Student Training in Engineering Program Intern

May 2019 - Aug. 2019

Google Inc.

- Refactored the Google Assistant Conversation Engine (ACE) to increase query fulfiller readability
- Improved ACE maintainability by removing access to internal properties and separating framework code from query fulfiller logic
- Launched the punt fulfiller feature to contribute to ACE standardization for Software Engineers at Google

Publications

Extended Abstract

N. Sullivan, “Bison Hacks the Yard: Assisting Underrepresented Students Overcome Impostor Syndrome with Augmented Reality and Artificial Intelligence”, AAAI, vol. 35, no. 18, pp. 15982-15983, May 2021.

Poster Presentation

I. Yesir, D. Scott, J. Sow, **N. Sullivan**, “The Bison Hacks The Yard: Developing a Sense of Belongingness in the Computer Science Community (Impostor Syndrome)”, Richard Tapia Conference, Sept. 2020.

Selected Press

News article featured in Howard University’s College of Engineering and Architecture

Apr. 2020

[Meet Karsh STEM Scholar Nicole Sullivan](#)

News article featured in Howard University’s College of Engineering and Architecture

Jan. 2020

[Meet Our Bison STEM Scholars](#)

Fellowships

Howard University [Karsh STEM Scholars Program, Cohort II](#)

Jun. 2018

- Selected to be one of 29 students to partake in Howard University's Ph.D. track development program
- Devoted to obtaining a Ph.D. in a STEM-related discipline and developing research skills prior to graduate school
- Awarded a 4-year full-ride undergraduate scholarship

Awards and Scholarships

College of Engineering Dean’s Fellowship, University of Washington

Mar. 2022

GEM Employer Fellow, GEM Fellowship & IBM

Nov. 2021

UC-HBCU Fellowship, University of California, Irvine

May 2021

CS Research Mentorship Program, Google

Feb. 2021

Undergraduate Consortium Scholar, Association for the Advancement of Artificial Intelligence

Feb. 2021

FOCUS Scholar, Georgia Tech

Jan. 2021

Explore Hopkins Scholar, Johns Hopkins University

Nov. 2020

Exposure to Research and Graduate Education Scholar, Stanford University

Oct. 2020

Richard Tapia Diversity Conference for Computing Scholar, Dropbox

Aug. 2020

Grace Hopper Conference Scholar, GoDaddy

Oct. 2019

Leadership and Development

Microsoft Code Academy, Lead Learner

Jan. 2019 - May 2022

Teaching weekly Introduction to Computer Science classes to K-5 NSBE Jr. students

National Society of Black Engineers, Jr., VEX IQ Robotics Mentor

Aug. 2018 - May 2022

Mentoring four teams of six 4th-6th grade Black scholars in the field of robotics by helping them build a robot to compete in the National NSBE Jr. Robotics Competition

National Society of Black Engineers (NSBE), Pre-College Initiative Chair

Aug. 2019 - May 2020

Planned several events for NSBE Jr. students (K-12) to inspire their interest in STEM fields

Data Science Bootcamp, Bit Project

Oct. 2020

Taught a 4-week data science boot camp to 15 college students at Howard University

Trainings

NVIDIA Deep Learning Institute Training - Washington, D.C.

Nov. 2019

Trained and deployed a whale face classifier to comprehend the foundations of deep learning

Council on International Educational Exchange (CIEE) - Berlin, Germany

Jul. 2018 - Aug. 2018

A 2-week seminar on global collaboration to solve vexing world health threats