

Spence Cox

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Education

Duke University, Pratt School of Engineering *BSc Mechanical Engineering* **Durham, NC** 2023-2027
GPA: 3.925 unweighted
Academic Magnet High School **North Charleston, SC** 2019-2023
GPA: 4.0 unweighted, 5.2 weighted

Professional Experience

Dominion Energy Innovation Center, *Researcher* **North Charleston, SC** Summer 2024

- TBD

Naval Information Warfare Center Atlantic, *Engineering Apprentice* **North Charleston, SC** Summer 2023

- Prepared training data for machine learning object classification model
- Developed educational training website for K-12 students using React library
- Granted Secret level security clearance

NASA STEM Enhancement in Earth Sciences *Selected Intern* **Austin, TX** Summer 2022

- Collaborated with NASA and UT Austin in fully funded, highly selective research internship
- Worked with Geographic Information System software and Python to map environmental changes using altimetric satellite data with proprietary methodology
- Research was accepted for presentation at the American Geophysical Union's (AGU) Fall 2022 Meeting

Joint Science & Technology Institute *Selected Intern* **Albuquerque, NM (Virtual)** Summer 2021

- Partnered with DOD and DOE scientists modeling environmental and human health impacts of chemical, biological, radiological, and nuclear threats as part of fully funded, nationally competitive STEM program

Extracurricular Activities

iMIND Laboratory *Undergraduate Researcher* 02/2024 - Present

- Leverage machine learning and AI models to identify neurodegenerative diseases from eye imagery
- Develop and optimize image classification Convolutional Neural Networks

Duke Undergraduate Energy & Climate Club *Club Member* 09/2023 - Present

- Explore the energy industry through discussions, speaker events, and research projects

Duke Electric Vehicles *Suspension Team Member* 09/2023 - Present

- Design, prototype, and deploy a single-seat electric vehicle
- Compete for energy-efficiency records in the Shell Eco-marathon

Community Service

Academic Magnet Peer Mentor Program *Board Member* 2020-2023

- Guided incoming freshman to achieve success in academically rigorous high school by mentoring students
- Elected Program Director as a junior with role of coordinating the entire program of 26 mentors and 180 mentees

Mayor's Youth Commission *Advisor* 2021-2023

- Participated in meetings and Youth Summits on political involvement, environmental awareness, and financial literacy
- Advised Mayor of Charleston on youth issues

Skills

- **Software:** SOLIDWORKS & Fusion 360 CAD, GIS, Excel
- **Programming:** Python (Proficient), R (Basic), JavaScript & HTML (Basic)

Outside Interests

Competitive Volleyball, Nature & the Environment, Economics, Philosophy