

EDUCATION

JOHNS HOPKINS UNIVERSITY (2025)

BS Computer Science, minor in Applied Mathematics and Statistics. GPA 3.2

Classes: Linear Algebra, Gateway to Python, Intermediate Programming (C, C++), Data Structures (Java)

CHESAPEAKE SCIENCE POINT HS (2021) WEIGHTED GPA: 4.33 UNWEIGHTED GPA: 3.87.

STEM ACADEMY. APPLIED PHYSICS LABORATORY. JHU

Completed 3 semester courses in Python and Cybersecurity.

INTERSHIPS/PROGRAMS

APPRENTICESHIP-HOPKINS EXTREME MATERIALS INSTITUTE (SUMMER 2021 AND 2020)

Worked on image processing of granular materials using segmentation and machine learning techniques. When running machine learning algorithms on granular materials, separate particles may be recognized as one. I worked on improving segmentation by creating algorithms and labeling data that would later be used for testing through the use of multiple types of regressions. I was the second author in a paper that published the research results. Presented individual research to Army Education Outreach Program leadership.

AI4ALL ARTIFICIAL INTELLIGENCE SUMMER PROGRAM (2020)

Participated in a 2-week artificial intelligence introduction workshop working on real-world applications of data science and machine learning with the goal of understanding impactful technology decisions.

INTERNSHIP - JOHNS HOPKINS APPLIED PHYSICS LABORATORY.

(FALL SEMESTER 2020) Applied neural networks to create a system of cameras that used object detection to recognize car models and track automobiles on the road.

(SUMMER 2019) Collaborated with 2 other interns building small autonomous robots that included cameras and ultrasonic sensors. Used TensorFlow and machine learning algorithms, coding in Python to program the robots. Obtained high school credit.

SAME CAMP (SOCIETY OF AMERICAN MILITARY ENGINEERS) (SUMMER 2019)

Earned scholarship to attend 1-week camp at The Air Force Academy in Colorado Springs. Pursued hands-on STEM activities promoting teamwork, leadership, project management, and problem solving.

SKILLS

Programming Skills in C, C++, Python, Java

Github, Docker, TensorFlow, OpenCV and NetworkX

Communication: Collaborated in professional projects, took public speaking classes, and presented research.

RESEARCH PUBLICATIONS/CONFERENCES

2021 PHYSICAL REVIEW. "Quantifying local rearrangements in three-dimensional granular materials"

2020 IEEE INTEGRATED STEM EDUCATION CONFERENCE (ISEC) Princeton University

"Object Detection and Machine Learning". Poster award. Abstract published at the IEEE archives.

REGIONAL SCIENCE FAIR (2015-2021) Participated every year. 2019 Encryption and Steganography, 2020 Object Detection and Machine Learning. Both 1st places in category Systems Software and awards from the Naval Research Laboratory and the Armed Forces Communications and Electronics Association.

OTHER ACTIVITIES

CLUB SOCCER. JHU (2021 TO NOW)

ROBOTICS TEAM (2015 – 2021) Qualified every year for state competition for VEX Robotics and SeaPerch Underwater Robotics. 1st Place VEX Robotics MD State Championship, Towson 2016. Qualified for Nationals, Iowa, 2017. Team Co-captain.

BRIDGE BUILDING CLUB (2019 –2021) team co-captain. 1st place AASHTO Maryland State Competition.