Caleb O'Neal

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Education

University of Virginia – B.S. in Computer Engineering — May 2028
Northern Virginia Community College – A.S. in Computer Science — **GPA:** 3.9 – June 2025
Arlington Career Center – High School Diploma — **GPA:** 4.4 – June 2025

Experience

Intern, Qualcomm Thinkabit Lab – Alexandria, VA — August 2024 – May 2025

- Programmed a 3-phase brushless DC motor simulation with a web interface to educate robotics students.
- Assisted in lab tasks like cleaning, organizing, leading school groups, and moving the lab between buildings.

Teaching Assistant, Arlington Career Center – Arlington, VA — January 2025 – May 2025

- Taught a college level statistics class as the primary instructor covering the principles of statistical analysis.
- Graded and reviewed students assignments including a poster sessions of students' individual research of a statistical relationship in real world datasets.

High School Intern, National Geospatial-Intelligence Agency – Springfield, VA — June 2024 – August 2024

- Redesigned a department website to guide agency management to enterprise architecture visualization tools.
- Migrated the team's Git repositories between Git hosts, ensuring commit history was preserved.
- Collaborated with the team's Scrum Master to follow Agile software development best practices.

Leadership & Activities

Robotics Team – Captain, Programming Lead — August 2022 – May 2025

- Managed a team of 50 with an annual budget of $50,000 to design, build, wire, program, and test a robot designed for the 2024 and 2025 FIRST Robotics Competitions.
- Redesigned the team management structure following significant growth in members.
- Led a team of 10 programmers using GitHub's pull request and issue systems for code review.

Projects

NASA App Development Challenge - PyCon US 2024 Poster Presentation

- Developed a 3D interactive simulation of lunar surface exploration for the planned 2027 NASA Artemis III mission to the lunar south pole.
- Presented our simulation to software industry professionals at the PyCon 2024 poster presentation session.
- Collaborated with a team to develop the app and manage team finances and logistics.

Martian Crater Data Analysis

- Analyzed a dataset of 350,000 martian craters to find a statistical relationship between crater eccentricity and its latitude on Mars, likely as a result of volcanic activity on the Martian surface.
- Programmed using SAS to perform statistical analysis and generate diagrams for depicting relevant data.
- Presented results to peers for review and at a local community college for a larger audience.

Skills

Programming: Python, C/C++, Java, JavaScript, SAS, R, Rust, Julia
Tools: Git, CI/CD, Linux, Docker
CAD: Fusion 360, OnShape, Altium