

Bradley C. Alford

Columbia, SC | (843) 516-1213 | bradleyalford1@icloud.com | linkedin.com/in/bradleyalford | github.com/bcalford

EDUCATION

University of South Carolina Molinaroli College of Engineering and Computing

May 2027

B.S. in Computer Information Systems, Minor in Business Information Management

- **Concentrations:** Artificial Intelligence, Cybersecurity
- **Honors & Awards:** EY USC Case Competition 2026 - 1st Place, GCC University Case Competition 2025 - 2nd Place, Capstone Scholar, Magellan Journey, President's List, Dean's List, Dean's Scholar, CFA Remarkable Futures

TECHNICAL SKILLS

Languages (ordered by proficiency): Java, Python (NumPy, Pandas, Matplotlib), C++, JavaScript, Swift, TypeScript

Tools and Frameworks: Jupyter, Node.js, React.js, Scikit-learn, PyTorch, Git

RELEVANT EXPERIENCE

Reliable Perception for Unmanned Maritime Systems

Aug. 2025 - Present

Undergraduate Research Assistant

Columbia, SC

- Enhancing maritime situational awareness and obstacle detection for a US Navy-sponsored research team of 15+ engineers by executing 10+ simulations and sensor performance evaluations.
- Improving detection accuracy in 5+ adverse conditions (fog, night, rain, etc.) through physics-based analysis and optimized sensor configurations.
- Increasing obstacle recognition and navigation performance by developing AI-enabled EO/IR camera models in PyTorch that outperform human operators.

Laboratory for Integrative Neuroscience Analysis

Sep. 2024 - Aug. 2025

Biomedical Research Assistant

Columbia, SC

- Led the development of the IPyNiiVue project, a port of the WebGL2-based NiiVue project into a Jupyter Notebook environment, using Python to seamlessly implement the neuroscience data visualization tool.
- Constructed 10+ comprehensive demos of the new features of IPyNiiVue, illustrating its entire range of capabilities to current and potential new users of the software.
- Collaborated with a diverse team of academic professionals to identify and address software issues, optimize performance, and implement required feedback from users.

University of South Carolina

Oct. 2023 - May 2025

Undergraduate Teaching Assistant

Columbia, SC

- Provided individualized support to students, thus helping them grasp important concepts in web development and introductory programming through both one-on-one tutoring sessions and group study sessions.
- Partnered with a team of undergraduate and graduate peers to develop supplemental materials, including practice problems and coding examples, and then present these materials to students.

LEADERSHIP EXPERIENCE

Theta Tau Professional Engineering Fraternity

Jun. 2024 - Present

Professional Development Chair + Academic Chair

Columbia, SC

- Developing brothers' professional development via organizing a formal company outreach dinner, career workshops, networking events with local companies, and resume/LinkedIn reviews.
- Promoting academic success in brothers through weekly study sessions, a maintained internal resource bank, and a series of academic workshops.

Residence Hall Association

Dec. 2023 - May 2024

Neighborhood Senator

Columbia, SC

- Organized and ran monthly neighborhood events, attracting an average of 250+ residents, fostering a sense of community and engagement across campus.
- Confirmed 40+ pieces of impactful legislation during my tenure, including drafting and advocating for several bills aimed at improving the overall campus experience for my constituents directly.