

Andrew Sanders

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[in Andrew Sanders](#)

[🌐 Personal Website](#)



Employment History

May 2022 – **Graduate Research Assistant.** Augusta University, Augusta, GA.

- Researched software vulnerabilities and detection methods.
- Developed secure coding education approaches.
- Investigated student-introduced software vulnerabilities.

May 2022 – August 2022 **Instructor.** Augusta University, Augusta, GA.

- Prepared teaching materials for AIST-2120 Principles of Scripting and Automation.
- Taught Python concepts to beginner programmers.

August 2021 – May 2022 **Graduate Teaching Assistant.** Georgia Southern University, Statesboro, GA.

- Tutored undergraduate students in CS1/CS2 and Game Programming.
- Developed programming assignments for Java courses.
- Created test cases for Gradescope to automate grading.
- Assisted in lectures and taught Programming Principles II.

August 2020 – August 2021 **Graduate Research Assistant.** Georgia Southern University, Statesboro, GA.

- Researched eye tracking, face image, and attention-based studies.
- Designed and implemented a Convolutional Neural Network for tracking attention.
- Led development of a multi-modal data collection system using machine learning, eye tracking, and webcams.

Education

August 2022 – **Ph.D. in Computer and Cyber Sciences,** Augusta University, Augusta, GA.

Research: Secure Coding Education

Advisor: Dr. Gursimran Singh Walia

GPA: 4.00 (Institution; 3.94 with Transfer Credit)

May 2022 **M.S. in Computer Science,** Georgia Southern University, Statesboro, GA.

Thesis title: *Developing and Validating a Machine Learning-Based Student Attentiveness Tracking System*

Advisor: Dr. Gursimran Singh Walia (co-advised with Dr. Andrew Allen)

GPA: 3.88

May 2020 **B.S. in Computer Science,** Georgia Southern University, Statesboro, GA.

GPA: 3.38 (Major: 3.76)

Research Publications

Journal Articles

- 1 A. Sanders, G. S. Walia, and A. Allen, "Assessing common software vulnerabilities in undergraduate computer science assignments," *Journal of The Colloquium for Information Systems Security Education*, 2024.  URL: <https://cisse.info/journal/index.php/cisse/article/view/179>.

Conference Proceedings

- 1 A. Sanders, G. S. Walia, L. Cordova, and T. Mendoza, "Pedagogical: Feedback tool to reduce software vulnerabilities in non-security computer science courses," in *2025 IEEE Frontiers in Education Conference (FIE)*, (Accepted), 2025.
- 2 B. Boswell, A. Sanders, G. S. Walia, and A. Allen, "Utilizing convolutional neural networks and eye-tracking data for classroom attention tracking," in *Hawaii International Conference on System Sciences*, 2024, ISBN: 978-0-9981331-7-1.  URL: <https://hdl.handle.net/10125/107021>.
- 3 A. Sanders, G. S. Walia, and A. Allen, "Analysis of software vulnerabilities introduced in programming submissions across curriculum at two higher education institutions," in *2024 IEEE Frontiers in Education Conference (FIE)*, 2024, pp. 1–9.  DOI: 10.1109/FIE61694.2024.10893015.
- 4 A. Sanders, G. S. Walia, and A. Allen, "Assessing common software vulnerabilities in undergraduate computer science assignments," 2023.  URL: <https://cisse.info/pdf/2023/presentations/download.php?file=GSOJP.pdf>.
- 5 B. Boswell, A. Sanders, A. Allen, G. Singh Walia, and M. Shakil Hossain, "Using ai-based nicats system to evaluate student comprehension in introductory computer programming courses," in *2022 IEEE Frontiers in Education Conference (FIE)*, 2022, pp. 1–9.  DOI: 10.1109/FIE56618.2022.9962681.
- 6 A. Sanders, B. Boswell, A. Allen, G. Singh Walia, and M. Shakil Hossain, "Development and field-testing of a non-intrusive classroom attention tracking system (nicats) for tracking student attention in cs classrooms," in *2022 IEEE Frontiers in Education Conference (FIE)*, 2022, pp. 1–9.  DOI: 10.1109/FIE56618.2022.9962447.
- 7 A. Sanders, B. Boswell, G. S. Walia, and A. Allen, "Non-intrusive classroom attention tracking system (nicats)," in *2021 IEEE Frontiers in Education Conference (FIE)*, 2021, pp. 1–9.  DOI: 10.1109/FIE49875.2021.9637411.

Skills

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| Programming Languages |  Git, Java, C, C++, Python, C#, SQL, PostgreSQL, MSSQL, MySQL, JavaScript/NodeJS, Bash, HTML, CSS, x86/x86-64 Assembly. |
| Applications |  Visual Studio, Visual Studio Code, Eclipse, PyCharm, Ghidra, Jupyter Notebook, GitHub, Overleaf/L ^A T _E X. |
| Machine Learning |  TensorFlow, Keras, PyTorch, Numpy, Pandas, Matplotlib, Scikit-learn. |
| Platforms |  Windows, Linux. |
| Miscellaneous |  Excellent communication, teamwork, problem-solving, and time management skills. |

Miscellaneous Experience

Awards and Achievements

- 2025  **Speaker**, Big Tide Changemakers Summit 2025.
Delivered an Artificial Intelligence and Cybersecurity Workshop to high school students.
- 2024  **Recipient**, DoD Cyber Service Academy Scholarship.
Awarded prestigious scholarship supporting students pursuing careers in cybersecurity and information assurance.
-  **Third Place**, Innovate 2024, Augusta University.
Presented an attention-tracker tool designed to assist students with learning disabilities.
-  **Speaker**, Big Tide Changemakers Summit 2024.
Delivered a talk on pursuing computer science as a career to high school students.

References

Dr. Gursimran Singh Walia

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1120 15th Street, Augusta, GA 30912.

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Dr. Jim Harris

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