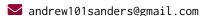
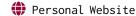
## **Andrew Sanders**









## **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**

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. OURL: https://cisse.info/journal/index.php/cisse/article/view/179.

### **Conference Proceedings**

- 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. **OURL**: https://hdl.handle.net/10125/107021.
- **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), Under Review, 2024.
- 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.
- 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. **9**DOI: 10.1109/FIE56618.2022.9962681.
- 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. PDOI: 10.1109/FIE56618.2022.9962447.
- **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. **9**DOI: 10.1109/FIE49875.2021.9637411.

## **Conference Proceedings (Under Review)**

**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), Under Review, 2024.

### **Skills**

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/對下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**

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

Former Professor of Computer Science (Retired) Georgia Southern University, 1332 Southern Drive, Statesboro, GA 30458.

**∠** jkharris@georgiasouthern.edu

#### Dr. Andrew Allen

Associate Professor of Computer Science Georgia Southern University, 1332 Southern Drive, Statesboro, GA 30458.

**✓** andrewallen@georgiasouthern.edu

### Dr. Pradipta De

Former Assistant Professor of Computer Science (Microsoft)

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