Austin O'Quinn

PhD Candidate in Computer Science and Engineering

+1-937-630-1575
oquinn.18@osu.edu
/AustinOQ

Professional Summary

PhD Candidate in Computer Science and Engineering specializing in AI safety, formal verification, and edge performance. Research focuses on the automated synthesis of verified neural network controllers and defense-in-depth architectures for autonomous systems. Professional background includes U.S. Army network operations and cybersecurity, alongside research at Idaho National Lab on safe AI Systems.

Education

The Ohio State University 2022 – Present
PhD in Computer Science and Engineering (In Progress) *Columbus, OH*

- PhD studies ongoing; candidacy exam passed
- Research centered on enabling AI at the edge (performance modeling and novel optimizations) and AI adoption (trust and privacy)

The Ohio State University 2022 – 2025
MS in Computer Science and Engineering *Columbus, OH*

- GPA: 3.571
- OSU Competitive Fellowship Recipient (First Year)

Wittenberg University 2018 – 2022
BS Mathematics, BA Computer Science *Springfield, OH*

- Graduated Summa Cum Laude with Overall GPA: 3.85
- Major GPA in Computer Science: 4.0

- **Programming Languages:** C, C++, Python, Java, Lean

Publications

Automated Synthesis of Verified Defense-in-Depth Architectures 2026

- **A. O'Quinn**, C. Snedeker, M. Taylor, L. Joneckis, C. Stewart
- IEEE/IFIP International Conference on Dependable Systems and Networks (DSN)-Under Review

Automated Synthesis of Verified Neural Network Controllers from Linear Temporal Logic Specifications 2025

- **A. O'Quinn**, M. Taylor
- IEEE International Conference on Robot and Intelligent Computing Systems (RICSS)

Environment-Aware Dynamic Pruning for Pipelined Edge Inference 2025

- **A. O'Quinn**, C. Snedeker, S. Zhang, J. Kline
- IEEE International Conference on Services Computing (EDGE)

Characterizing and Modeling AI-Driven Animal Ecology Studies at the Edge 2024

- J. Kline, **A. O'Quinn**, T. Berger-Wolf, C. Stewart
- ACM/IEEE Symposium on Edge Computing

Characterization of Parallelism Techniques for Decision Tree Ensembles 2024

- C. Stewart, E. Romero Gainza, **A. O'Quinn**

- ACSOS Conference

Effects of an Electron Beam on Dust Charge and Ion Motion in a Plasma 2021

- J. Williams, **A. O'Quinn**, D. Sanford, K. Vermillion, L. Matthews, T. Hyde
- APS Division of Plasma Physics Meeting Abstracts

Experience

Edge AI Safety Intern March 2025 – Present
Idaho National Lab *Idaho Falls, ID*

- Research novel controller synthesis techniques for critical infrastructure
- Train and deploy DNN based controllers
- Write and present research findings

Graduate Research Assistant Aug 2022 – Present
The Ohio State University *Columbus, OH*

- Conduct research on enabling high-performance inference on low-powered edge devices
- Software Engineer for ICICLE Institute

Lecturer Aug 2024 – Dec 2025
The Ohio State University *Columbus, OH*

- Taught Introduction to Operating Systems course to undergraduate students
- Developed and delivered lectures on C programming, processes, file systems, and virtual memory
- Prepared course materials, assignments, and assessments

Information Technology Specialist Jul 2017 – Jul 2023
United States Army Reserve *Columbus, OH*

- Administered Army network systems and ensured cybersecurity protocols were followed
- Led training on radio operations and managed night shift IT operations during annual training exercises

Software Engineer Intern May 2022 – Aug 2022
Unite Us *Remote*

- Developed a mobile app to guide users through healthcare resources
- Overhauled internal documentation of the Unite Us payments platform

Teaching Assistant and Tutor Aug 2020 – May 2022
Wittenberg University *Springfield, OH*

- Conducted lab sessions for Introduction to Computer Science courses
- Redesigned lab curriculum to improve student engagement and learning outcomes
- Tutored students in Calculus I-III, Linear Algebra, Discrete Math, Probability, and various Computer Science courses

Software Engineer April 2021 – Aug 2021
Wittenberg University Plasma Lab *Springfield, OH*

- Contributed to an event-driven simulator modeling ion motion in plasma
- Developed tools to analyze simulation and experimental results

Awards & Honors

- **OSU Competitive Fellowship** – Awarded for outstanding academic performance in the first year of graduate studies
- **Summa Cum Laude Graduate** – Wittenberg University, recognizing a GPA of 3.85 overall and 4.0 in Computer Science major
- **Pi Mu Epsilon Inductee** – National Mathematics Honor Society membership for academic excellence in mathematics
- **Department and University Honors** – Received for completing a research thesis while meeting departmental and university honors requirements
- **Charles and Elsie Little Mathematics Award** – Received for exceptional performance in Mathematics