

Education

- 2023–Present **Ph.D. Computer Science**, *Virginia Polytechnic Institute and State University (Virginia Tech)*, Expected May 2027
- 2025 **M.S. Computer Science**, *Virginia Polytechnic Institute and State University (Virginia Tech)*
- 2021 **B.S. Computer Engineering**, *University of Virginia*

Research Interests

My research investigates transfer student pathways and success in computer science, focusing on how institutional structures, prior coursework, and social factors influence student outcomes. I combine machine learning and data analytics with computing education research methods to identify barriers to persistence and develop predictive models of student success. My work contributes to broadening participation in computing and improving institutional support for transfer students.

Publications

Peer-Reviewed Conference Papers

- Wali, N. and Hooshangi, S. 2025. *Transfer Students in Computer Science: Examining Barriers, Success Metrics, and Research Gaps*. Proceedings of the ACM Conference on Innovation and Technology in Computer Science Education (ITiCSE 2025). doi.org/10.1145/3724363.3729118
- Wali, N. and Hooshangi, S. 2025. *Gender Diversity in Computer Science Through a Global Lens*. IEEE Frontiers in Education Conference (FIE 2025). [doi: 10.1109/FIE63693.2025.11328289](https://doi.org/10.1109/FIE63693.2025.11328289)

Doctoral Consortium

- Wali, N. 2025. *Transfer Student Success in CS: Modeling Pathways and Outcomes*. ACM Conference on International Computing Education Research (ICER 2025), Charlottesville, VA. doi.org/10.1145/3702653.3744292

Preprints

- Almutairi, M., Aktaş, M. Y., Wali, N., Mitra, S., and Zhou, D. 2024. *Enhancing Temporal Link Prediction with HierTKG*. arXiv preprint [arXiv:2412.12385](https://arxiv.org/abs/2412.12385). doi.org/10.48550/arXiv.2412.12385

Talks and Presentations

Talks

- Wali, N. 2026. *Experiences in Transition: Survey Development, Validation, and Analysis of Computer Science Transfer Student Pathways*. CRA-WP Grad Cohort Lightning Talk, Seattle, WA.

Selected Poster Presentations

- Wali, N. and Hooshangi, S. 2026. *Experiences in Transition: Survey Development, Validation, and Analysis of Computer Science Transfer Student Pathways*. ACM Capital Region Celebration of Women in Computing.
- Wali, N. and Hooshangi, S. 2025. *Machine Learning Insights into Academic Success in CS3: The Role of Mathematics and CS Coursework*. ACM Capital Region Celebration of Women in Computing.

Fellowships, Awards, and Scholarships

- 2026 **Preston and Catharine White Family Graduate Fellowship** (\$10,000), Virginia Tech. Competitive fellowship awarded in recognition of academic merit and family support responsibilities.
- 2026 **Dr. Richard Nance Graduate Fellowship Award** (\$3,187), Virginia Tech. Competitive fellowship which recognizes Ph.D. students in Computer Science for their academic progress and achievements.
- 2023 **Innovation Campus Scholarship**, Virginia Tech. Awarded for research on broadening participation in computing and ML-based student success modeling.

Research Experience

- August 2023–Present **Graduate Researcher**, *Computer Science Education Research, Virginia Tech*
- Investigate transfer student pathways, persistence, and success in computer science.
 - Develop survey instruments and examine academic, institutional, and social factors affecting transfer students.
 - Apply machine learning, data analytics, and knowledge graph methods to model student outcomes.
 - Conduct systematic literature review on transfer students in computer science education.
- May 2026–August 2026 **Graduate Research Assistant**, *AI in Graduate Research Study, Virginia Tech*
- Collaborate with Dr. Sara Hooshangi on a study examining graduate students' use of artificial intelligence in research.
 - Prepare IRB documentation, including study protocols, consent materials, recruitment language, and data management procedures.
 - Conduct literature review on AI-assisted research workflows, graduate student research practices, and AI use in academic settings.
 - Support qualitative data collection through participant interviews focused on experiences using AI in research.
- Jan 2023–May 2024 **Graduate Research Assistant**, *Hume Center, Virginia Tech*
- Investigated cyberattack detection using real-world network traffic datasets.
 - Reviewed a classification framework for evaluating malware detection approaches.
 - Conducted early-stage modeling and analysis of network traffic data.
- Aug 2019–Jan 2020 **Undergraduate Research Assistant**, *Engineering Education Research Group, University of Virginia*
- Conducted research on educational technology for engineering education.
 - Designed UI prototypes using HTML and CSS.
- June 2019–Aug 2019 **Undergraduate Research Intern**, *DGIST, South Korea*
- Developed robotic localization systems using ROS, sensor fusion, and Kalman filtering.
 - Transitioned localization models from Gazebo simulations to real robotic platforms.

Teaching Experience

- 2026 **Graduate Teaching Assistant**, *Artificial Intelligence for Software Delivery, Virginia Tech*
- 2025 **Graduate Teaching Assistant**, *Introduction to Artificial Intelligence, Virginia Tech*
- 2024–2025 **Graduate Teaching Assistant**, *Information Visualization, Virginia Tech*
- 2019–2021 **Teaching Assistant**, *Ordinary Differential Equations, University of Virginia*

Professional Experience

- Jul 2021–Mar 2022 **Computer Engineer – Autonomous Vehicle Simulation**, *DCS Corporation*
- Developed and validated autonomous vehicle control systems in simulation and real-world environments.
 - Conducted hardware-in-the-loop testing for track-following logic.
 - Integrated sensor data (LIDAR, GPS) for system validation.
- Jun 2020–Aug 2020 **Autonomous Vehicles Research Intern**, *DCS Corporation*
- Developed C++ programs implementing JAUS protocol communication.
 - Supported autonomous vehicle system integration and field testing.

- Jan **Undergraduate Lab Assistant**, *Semiconductor Fabrication Lab, University of Virginia*
2020–Mar ○ Assisted with semiconductor fabrication operations and laboratory logistics.
2020 ○ Supported maintenance and operation of laboratory equipment.

Service and Leadership

- 2026 CAPWIC Student Volunteer
2026–Present Innovation Campus Representative, D.C. Area Graduate Student Assembly
2025–2026 Instructor, Girls Who Code (Noble Garden Academy)
2024–Present Graduate Honor System Panelist, Virginia Tech
2024–Present Student Ambassador, Virginia Tech Innovation Campus

Technical Skills

- Programming Python, Java, C++, JavaScript, SQL, HTML, CSS
Tools React, Dash, ROS, Gazebo, Neo4j, NetworkX, Streamlit