

Cole F. Wendrowski

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EDUCATION

Virginia Tech | Blacksburg, VA Expected Graduation: Spring 2027
M.S. Computer Science, Research in AI for Robotics
Virginia Tech | Blacksburg, VA Expected Graduation: Spring 2026
B.S. Computer Science, Minors in Economics and Math | Major GPA: 3.669 / 4.00, Cumulative GPA: 3.62 / 4.00
Classes: Human-Robot Interaction, Robotics and Automation, Intro to AI, Computer Systems, Data Structures & Algorithms

WORK EXPERIENCE

Flight Software Engineer Intern May – August 2025
Rocket Lab | Littleton, CO

- Redesigned Rocket Lab's spacecraft command scheduler, unifying legacy interfaces and building new scheduling/query commands and telemetry to streamline ground operations.
- Accelerated PyTest integration test framework by creating step filter, reducing test execution time by 12x.
- Configured Xiphos Q7 processor board for conference demo and authored documentation to guide future projects.
- Implemented unit and integration tests and resolved Parasoft violations to improve reliability and security.

Autonomous Navigation and Networking Engineer Intern June – August 2024
Xcelerator Group | Fairfax, VA

- Developed a GPS-correction system to improve the accuracy of autonomous navigation for mining trucks by 99.5%.
- Built simulation framework with Python and Wireshark to stress-test RTK-correction network, increasing load >100x.
- Developed embedded publisher and subscriber applications using C++, Docker, and RTI Connex DDS to enable reliable cross-network communication over wide-area networks via LTE, without static IPs or multicast.
- Led client meetings to share design, build, and testing updates to meet client requirements and deadlines.

Software Engineer Intern June – August 2019, 2020
Kapsch TrafficCom | McLean, VA

- Developed custom Continuous Integration (CI) for our unique V2X technology, deployment structure, and artifact requirements through an agile scrum framework to improve software quality and reliability.
- Conferenced with international teams and wrote internal guides to share my CI expertise and guide future CI projects.

Software and Embedded Systems Intern June 2018 – August 2018
eTrans Systems | Fairfax, VA

- Worked in an agile scrum to program front-end interfaces with Java, FreeMarker, and HTML to improve customer-facing analytics and simulations for vehicle-to-vehicle and vehicle-to-infrastructure communications.
- Soldered electronics to assemble roadside units for delivery and tested both roadside and onboard units through custom simulation scripts and physical testing on-site to improve device functionality and stability.

PROJECTS

AutoNav – Virginia Tech Competitive Robotics Organization January 2026 – Present

- Developing a ROS2 LiDAR stack to enable real-time obstacle avoidance in autonomous navigation competition.

Intelligent Motion Planning and Control of Robot Arm via LLM

- Developed simulation that reasons about states using local LLM and controls robot via tools to complete tasks.

Robot Arm Kinematics and Control (ME 5704: Robotics and Automation)

- Implemented robot-arm kinematics and task-space control in MATLAB/Simulink (forward/inverse kinematics, Jacobian-based force/PD control) with constrained haptic interaction (geofences) and smooth trajectory tracking.

Convolutional Deep Q-Network Game Agent

- Developed ϵ -greedy CDQN using PyTorch to beat Gymnasium games using raw pixels (CartPole, Pong, Flappy Bird).

LEADERSHIP

President of Sigma Phi Epsilon Fraternity November 2024 – November 2025

- Led 166-member organization with \$100,915 in revenue, achieving the largest recruitment class in chapter history with 92.5% bid acceptance, #2 GPA, four philanthropy victories, and Platinum Chapter status (only 1 of 6/30 fraternities).

Vice-President of SigEp Learning Community November 2023 – November 2024

- Created and led five committees to improve academic and professional development and organizational success.

TECHNICAL SKILLS

Languages: Python (PyTorch), C++/C, Java, MATLAB/Simulink, Assembly; LaTeX

Tools & Skills: Gymnasium, PyBullet, Ollama, ROS2/Nav2, Azure, Git, CI, Docker, Wireshark; agentic coding, soldering