Nicholas Sardinia

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EDUCATION

University of Florida   **GPA: 3.7/4.0**
Bachelor of Science in Computer Science   **Dec 2025**
Bachelor of Science in Mechanical Engineering   **Dec 2025**
Honors Program

EXPERIENCE

GE Aerospace, September 2024 - Present
Software Engineering Intern
- Developer on the tools and simulation team, building software to improve employee productivity.
- Avionics simulation software with .NET, containerized continuous integration with Docker and Jenkins.
- Internal management, data analytics, and requirements gathering web tools with Vue, Express, and Node.

Sandvik Mining and Rock Solutions, May 2024 - July 2024
Software Engineering Intern
- Designed and implemented electrical boxes and user interfaces for distributed control of mining rigs.
- Distributed control boxes communicate with networked PLC's using CANopen and Modbus TCP.
- Developed customizable data logging application for real-time analytics.

Active Perception Robotics Intelligence Lab (APRILab), January 2023 - Present
Undergraduate Researcher, Path Planning and Image Segmentation
- Programmed coverage path planning algorithm for an aquatic vessel equipped with side-scan sonar.
- Written in Python, integrated with image processing from OpenCV, GRIP, and FastSAM.
- Developed novel path optimizations for a paper presented at the 2024 AIAA SciTech Forum.

Machine Intelligence Lab, August 2022 - Present
Undergraduate Researcher, Project Manager and Systems Lead
- Designed and implemented interdisciplinary project management solutions in active use by 90 researchers.
- Improved performance of autonomous submarine by implementing and modifying control algorithms.

Teaching Assistant, January 2022 - August 2024
Computer Aided Graphics and Design (EML 2023), January 2022 - August 2024
Thermodynamics (EML 3100), August 2023 - August 2024
- Hold office hours for ~150 students to help them learn efficiently.
- Assist students with thermodynamics concepts and problems.
- Grade assignments and provide feedback, encourage best practices in modeling.

SKILLS

Programming: Python (SciPy, Numpy, Matplotlib, Shapely), Java, Jenkins, MATLAB, C++, JavaScript.
Software: Docker, Postman, Git, Linux, Qt, Vue, Express, .NET, ROS, Gazebo, SolidWorks.
Experience with: Software Engineering, Algorithm Design, Machine Learning, Web Development, Finite Element Analysis, PLC, Distributed Controls, Robotics, Autonomous Path Planning.
Qualifications: CSWA (Certified SOLIDWORKS Associate).

LinkedIn: linkedin.com/in/nsardinia/   **GitHub:** github.com/nsardinia