

# DANIEL I. STABILE

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## EDUCATION

### M.S. COMPUTER SCIENCE

Cornell University, Bowers CIS  
Ithaca, NY • Class of 2023  
GEM Fellow

### B.S. COMPUTER SCIENCE

Cornell University, College of Engineering  
Ithaca, NY • Class of 2021  
Magna Cum Laude • Ryan Scholar

## EXPERIENCE

### Graduate Researcher | EmPRISE Lab, Cornell University | Spring 2022 - May 2023

- Built state-of-the-art robotic feeding system capable of safely and effectively feeding people with severe mobility limitations who require placement of food items inside their mouths
- Proposed a contact-aware task space compliant controller that discerns nature of physical interactions using ML-based methods (TCN, LSTM, SVM) trained on self-curated multimodal (visual + haptic) dataset
- Used model predictive control to generate robot trajectories for feeding liquid food items that easily spill
- Designed and conducted human-robot interaction user studies for care recipients with mobility limitations to evaluate robot-assisted feeding system
- Utilized Fusion360 and 3D printing technology to rapidly produce high-quality parts for numerous projects in the lab, enabling colleagues to achieve significant breakthroughs in their research

### GEM Fellow Intern | MIT Lincoln Laboratory | Summer 2021

- Developed synthetic track generator of flight activities to be used for validation of unsupervised machine learning classifiers meant to protect US airspace by detecting anomalous airborne objects
- Discussed work directly with project sponsors (confidential) and presented final results to laboratory division
- Received Department of Defense security clearance through eQIP application in May 2021

### Software Engineer Intern | Maculogix | Summer 2020

- Eliminated production bottleneck by reducing product final calibration process from 135 min to 35 min
- Worked in C# implementing advanced interpolation search algorithms and automating tedious human processes with OpenCV using the Emgu wrapper and FLIR Systems Spinnaker SDK
- Wrote work instructions and ISO 9000 validation/verification procedures for software I developed

### Founding Member & Software Developer | Vita Innovations | March 2020 - January 2022

- Built desktop application/smart mask interface to display body temperature, heart rate, blood oxygen levels, and respiratory rate for healthcare professionals to monitor patients in emergency waiting rooms
- Created and maintained company website and brand with HTML, CSS, Bootstrap, and Illustrator
- Advise (presently) the software team on application design and integration with hardware

## TEACHING & SERVICE

### Graduate Teaching Assistant | Cornell University | Feb 2020 - May 2023

- CS 1110 - Intro to Computing in Python - Spring 2023, CS 4620 - Computer Graphics - Fall 2021 & Fall 2022 (Head TA), CS 4670 - Computer Vision - Spring 2022
- Wrote exam questions, held weekly office hours, led lab/discussion sessions, scheduled staff meetings and exam grading sessions, and delegated assignment creation and grading to other staff members

### SoNIC Workshop 2022 | Cornell University | July 2022

- Organized [SoNIC](#), an intensive week-long robotics workshop in collaboration with Cornell Bowers CIS DEI Office, to inspire underrepresented students across USA to pursue graduate studies in tech fields
- Created course content for theory and hands-on sessions, and instructed 30 participants to help develop "smart canes" – assistive technology to help the visually impaired navigate safely

## SKILLS

- **Coding** - Python, NumPy, SciKit Learn, PyTorch, oCaml, Java, C#, HTML & CSS, Bootstrap, ROS
- **Tools** - Jupyter Notebook, Git, Linux, Vim, VS Code
- **Design** - InDesign, Illustrator, Photoshop, Premiere Pro, After Effects, 3D Printing, Fusion360
- **Soft** - Scheduling, Time-management, Planning, Active Listening, Friendliness, Respectfulness, Responsibility, Attention to Detail, Work Ethic, Observation, Written Communication, Mentorship

## COURSEWORK

- Robot Manipulation, Foundations of Robotics, Machine Learning for Intelligent Systems, Machine Learning with Biomedical Data, Computer Vision (CS Undergrad, CS PhD, ECE), Computer Analysis of Biomedical Images