

EDUCATION

Carnegie Mellon University Pittsburgh, PA M.S. Robotics	Expected May 2027
- Research Based Masters Program	
University of Maryland College Park, MD B.S. Mechanical Engineering	May 2023
- Robotics Minor, Computer Engineering Minor, & Mathematics Minor	
	GPA: 3.75

EXPERIENCE

Robotics Specialist – CATT Lab	Oct 2023 – Aug 2025
<ul style="list-style-type: none">Robotics technical expert for a team making a Robotic Technical DashboardDeveloped a real-time Self-Supervised Multi-Modal Anomaly Detection ModelWorked with the ROS-integrated Phoenix Autonomy Stack from ARLHardware repair and maintenance on the ClearPath Husky robotCreated ROS-based MITM Attacks to alter the perceived point cloud	
Independent Researcher – PRG Lab at UMD with Dr. Yiannis Aloimonos	Sept 2023 – Dec 2024
<ul style="list-style-type: none">Added wing proprioception to hummingbird-inspired Nimble+ Flapper DroneCreated a test deck to incorporate the wing sensors into the CrazyFlie firmwareUsed wing position to model high-frequency movementStabilizing camera frame to enable visual odometryDeveloped Mujoco implementation of Nimble+ Flapper DronePart-time Independent Researcher	
Design Engineer – Airgility	Sept 2020 – Sept 2023
<ul style="list-style-type: none">Designed, tested, and assembled the Minotaur droneUtilized PX4 firmware to create a new type of tilt-rotor droneUpdated controller-to-drone pipeline to incorporate ROS2Designed PCB for power distribution and sensor integrationWrote and edited manufacturing SOP's and assembly documentationDeveloped battery system implemented across the company's product suiteLed a team from ideation to working prototype of a taggant security systemStreamlined and formalized 3D printing operationSupported product demos to customers and investors	
Independent Researcher – MoT Lab at UMD with Dr. Michael Otte	Jan 2023 – May 2023
<ul style="list-style-type: none">Designed and tested algorithms to arrange a robotic swarm in concentric circlesDesigned connectors and tested the validity of Duo pairsPresented work at UMD Robotics Research SymposiumWorked with a swarm of Kilobot robots	
Robotics Intern – ArtIAMAS & ARL	June 2022 – Aug 2022
<ul style="list-style-type: none">Designed robotic system to survive 30ft drop and survey ground for ArUco markersDesigned mechanical shell to protect and support robotic dog in landingIntegrated ROS between the robotic dog and a Raspberry Pi 4Presented work at ARL facility in Grace's Quarters	

Gemstone Honors Program – Team AutoCycle	April 2019 – May 2022
<ul style="list-style-type: none">● Four-Year Undergraduate Team Research Project● Project goals include designing and building an autonomous bicycle that will be summoned to a rider, ridden by said rider, and then drive itself● Worked with preliminary control system design● Developed and manufactured power distribution board for the bicycle● Defended thesis in front of a team of experts	

Teaching Assistant – University of Maryland	Jan 2020 – May 2020
<ul style="list-style-type: none">● ENME382: Introduction to Material Science<ul style="list-style-type: none">○ Introductory to Material Science topics including crystal structures, polymers, phases of iron, and material selection● ENME202: Computing Fundamentals for Engineers<ul style="list-style-type: none">○ Coding class that focused on MATLAB and C++● GEMS104: Topics in Science, Technology, and Society<ul style="list-style-type: none">○ Mentorship for a group of first-year students in the Gemstone Program● GEMS102: Research Topic Exploration and Team Formation<ul style="list-style-type: none">○ Guiding new members of the Gemstone Program in research literacy and ideation for their research team	

Engineering Intern – MidEnterprises	July 2020 – Sept 2020
<ul style="list-style-type: none">● Created an automatic file system with Drive and Google scripting● Supported HVAC inspections● Reviewed Energy Audits	

PUBLISHED WORK

Noorani, N., Puranic, A., Mirenzi, J. , Baras, J.S. (2025). Self-Supervised Time-Series Anomaly Detection with Temporal Logic Explanations. Game Theory and AI for Security. GameSec 2025.	Oct 2025
Noorani, M., Puthanveetil, T.V., Zoulkarni, A., Mirenzi, J. , Grody, C.D., Baras, J.S. (2025). Multimodal Anomaly Detection for Autonomous Cyber-Physical Systems Empowering Real-World Evaluation. In: Sinha, A., Fu, J., Zhu, Q., Zhang, T. (eds) Decision and Game Theory for Security. GameSec 2024. Lecture Notes in Computer Science, vol 14908. Springer, Cham.	Oct 2024

VOLUNTEER WORK

Program Advisor – Capitol City Robotics	Nov 2023 – Apr 2025
<ul style="list-style-type: none">● Assist students through the underwater robotic competition Sea Perch● Run seminars to teach middle-school-aged students Python and engineering design● Support Vex IQ teams in building and coding competition robots	

AWARDS

President of Pi Tau Sigma	May 2022 – May 2023
<ul style="list-style-type: none">● Led the Tau Mu Chapter of the Mechanical Engineering Honor Society● Grew the organization to triple its size	
Clark Legacy Scholar	Sept 2018
<ul style="list-style-type: none">● Merit-based scholarship for The University of Maryland	
