Conor Gagliardi

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Experience

MONTEREY BAY AQUARIUM
Robotics Research Intern
Jun 2025 – Aug 2025 | Monterey, CA

- Implemented "Z-Splat" RGB–Sonar sensor fusion for Gaussian Splatting
- Led the collection of real-world sonar and RGB monocam data
- Curated simulated data using The Stanford 3D Scanning Repository
- Presented research at the MBARI intern symposium

NASA JSC ELECTRO-OPTICS LABORATORY
Optical Navigation Software Engineer Intern
May 2024 – Aug 2024 | Houston, TX

- Curated calibration tool for intrinsic parameters of Artemis II flight cameras
- Procured camera calibration datasets for testing
- Facilitated checkerboard and ChArUco board calibration tests for comparative analysis with star field calibration
- Networked with different branches at NASA to enable cross-division collaboration

NASA JSC SENSS LABORATORY
GN&C Development and Testing Intern
Jan 2024 – Aug 2024 | Houston, TX

- Tested LIDAR-based hazard detection, safe site identification, and safe site selection in real-time HWIL environment
- Developed test plan for evaluating machine vision-based GN&C algorithms
- Conducted experimental test campaign to evaluate active terrain relative navigation algorithms
- Developed PID controller for manual gimbal control with auxiliary IMU using Raspberry Pi UART and SBUS circuit design

NASA JSC HIVE LABORATORY
Autonomous Rover & Augmented Reality Spacesuits Intern
Aug 2023 – Dec 2023 | Houston, TX

- Developed rover's autonomous navigation system with obstacle avoidance
- Created a tessellated map to facilitate autonomous navigation using ROS and RGBD video feed
- Programmed umbilical interface assembly to simulate life support systems
- Improved a telemetry stream that displays rover telemetry, location / GPS data, and speed
- Physically tested designs on a simulated Mars terrain field

UNIVERSITY OF OKLAHOMA – NSF REU
UAS GN&C Research Intern
May 2023 – Aug 2023 | Norman, OK

- Trained and used a YOLOv8 model for real-time UAS detection, tracking, and relative localization
- Used OpenCV to estimate position, velocity, and attitude from camera data
- Designed a formation control strategy for managing UAS swarm movements
- Validated controls via simulation & UAS flight tests (DroneDome at OU)
- Conducted real-world tests at the UASIPP site for further system performance

Education

Oregon State University
Robotics Ph.D. - Advisor: G. Hollinger
Robot Decision Making Lab

Rochester Institute of Technology
B.S. in Computer Science

SUNY Adirondack
Early College Career Academy in Networking / Cyber Security

Cochise College
Intelligence Operations Studies

Skills

Programming Languages / Toolsets:
Python, ROS(2), Linux, Raspberry Pi, Ubuntu, Git, C++, C, SQL, Java, Lisp, Matlab, Simulink, Unreal Engine, Arduino, Gazebo

Frameworks / Libraries:
OpenCV, TensorFlow, PyTorch, SKLearn, NumPy, Pandas, Gazebo, HoloOcean, Microsoft Airsim, Flightmare

Professional:
Communication, Teamwork, Military Briefing, Research Proposal, Collaboration, Self-Motivation, Passionate

Leadership & Activities

NASA Tours & Lectures Astronaut Chair
NASA Fish Committee President
RIT Robotics, AI, and Space Exploration Clubs
OSU & RIT Div. 1 League of Legends E-Sports Athlete

Projects

Monocular Vision-Based Control of UAS Swarm (NSF-REU)

Gesture-based UAV Control via EMG+IMU (Undergrad)

SLAM Integration for Autonomous UAVs (Independent)

Experiment adding SMOTE to CNN Net Traffic ID (Undergrad)

Fashion MNIST Classifier w/ TensorFlow CNN (ML)

OpenCV Motion Detector / Object Tracking / Optical Flow (Personal)