Julian *Tamayo*

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Education:

University of Rhode Island (URI), South Kingston, RI — Expected May 2028
Bachelor of Science in Electrical Engineering and Bachelor of Arts in French — GPA: 3.50 / 4.00
International Engineering Program

- 5-year dual degree, interdisciplinary program (year 3/5)

Skills Summary:

- Programming: Python C++, MATLAB
- Robotics & Simulation: ROS/ROS2, Gazebon, Unity
- Computer Vision: OpenCV, camera calibration, pose estimation
- Machine Learning: Regression modeling, LiDAR feature engineering
- Systems: Linux, Git, Socket programming
- Security: Active DoD Secret Clearance

Experience:

Engineering Intern at Naval Undersea Warfare Center (NUWC), Newport RI
Naval Research Enterprise Internship Program (NREIP) — May 2025 – July 2025

- Developed Python-based automoated testing software to evaluate network performance
- Implemented sock communication between routers for real-time diagnostics
- Created executable software with a Graphical User Interface (GUI) for streamlined data collection & analysis
- Held active DoW/DoD Secret Security Clearance

Intelligent Control Robotics Research Lab, Kingston RI — September 2024 – present

- Developed ROS-based drone simulation integrating Unity and Gazebo
- Integrated computer vision (AprilTag detection) into robotic perception pipeline
- Configured Linux environments managed ROS dependencies

2023 – present
Electrical Lead (spring 2025 – present), Media Lead (2024 – 2024)

- Organized meetings for the team's website as well as for the electrical systems
- Designed and constructed the electronic placement board for electrical bottle
- Soldered and sealed connections between bulkhead connections and electronics
- Programmed and Designed team website hosting using Netlify

Projects:

PHUISIM research project in Intelligent Controls Research Lab (ICRL) — September 2024 – present

- Integrated Unity into ROS simulation to track drone position in Gazebo simulation
- Calibrated camera to account for distortion for hand tracking

ARM project using Robotic Arm & Computer Vision for HACK@URI competition — February 2026

- Designed robotic arm system using OpenCV and inverse kinematics for object replication
- Implemented chessboard-based camera calibration and lens distortion correction
- Integrated calibrated camera into real-time object detection and pose estimation pipeline
- Achieved 2nd Place in AI Startup Track at HACK@URI 2026

Machine Learning for Engineering Applications Final Project — December 2025

- Developed nonlinear regression model to predict vehicle trajectory
- Engineered LiDAR-derived features for autonomous driving policy learning
- Validated predicted steering/speed outputs against ground truth data

Activities:

- Electrical Lead - Hydrobotics — 2023 – present
- Member - URI Autonomous Racing Club (ARC) — 2025 – present
- Member - American Institute of Aeronautics and Astronautics (AIAA) — 2026 – present
- Mentor – FIRST Tech Challenge (FTC), guiding students in robot design and programming — 2025 – present

Relevant Course Work:

- Foundations of Robotics (ELE 456 at URI)
- Machine Learning for Engineering Applications (ELE 491 at URI)
- Cyber Security Technology (CSF 102G at URI)
- Computer Programming (CSC 211 at URI)