

# Anthony Camarillo

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## EDUCATION:

### California State University, Long Beach(CSULB)

GPA: 3.5

Masters of Science., Mechanical Engineering, Control and Robotics

Expected Graduation: December 2025

Bachelors of Science., Mechanical Engineering, Minor: Applied Mathematics

December 2019

*Relevant Coursework: Modeling and Analysis of Dynamic Systems, Modern Control of Dynamic Systems, Robot Modeling and Control*

## RESEARCH EXPERIENCE:

### PACK Lab, CSULB - Student Research Member

September 2024 - Present

- Researching implementations of reinforcement learning to find the optimal path for multiple manipulators in environments with obstacles.
- Developing environments with PettingZoo to test reinforcement learning algorithms and simulating training in MuJoCo.

## PROJECTS:

### Model Reference Adaptive Controller For Inverted Pendulum

November 2024

- Implemented a modified Model Reference Adaptive Controller(MRAC) for control of an inverted pendulum system, improving the system's response to input and disturbances.
- Benchmarked implemented controller performance against traditional MRAC and PID controllers through simulations in MATLAB/Simulink and presented results.

### Controller Design for Half Quadcopter System

November 2024

- Designed PID, pole placement, and LQR controllers for controlling the pitch angle of a 2 DOF half quadcopter to meet design criteria and stabilize the system.
- Developed a dynamic system model using MATLAB's System Identification Toolbox and Simulink to validate designed controllers against measurements taken from the physical hardware.

## ADDITIONAL EXPERIENCE:

### Robert Half - Emergency Rental Assistance Case Manager

September 2020 - December 2022

- Communicated with applicants of an Emergency Rental Assistance Program to collect necessary documents for processing their application, providing over one million dollars of rent and utility assistance.
- Collaborated with team members to review and verify each application was processed correctly, ensuring quality checks before submission for approval.
- Trained both new and current peers on the application process workflow while staying updated on procedural changes.

## SKILLS:

**Programming:** C++, MATLAB, Python, SQL, Git

**Simulation:** MuJoCo, Simulink

**Software:** AutoCAD, Fusion360, ROS, SolidWorks, MS Excel

**Hardware:** Arduino, ESP32