Yves Mojica

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Objective

Computer Engineering Major with a focus on Embedded Systems and Analog/Digital circuits. Seeking Hardware or Embedded Systems related intern positions for Summer 2025.

Education

University of California, San Diego September 2022 - (Expected) June 2026
– Bachelor of Science in Computer Engineering, GPA: 3.19

Projects

New Member Project | Rocket Propulsion Lab October 2022 - May 2023

- Participated in a new member project to lead a team of 5 to design a small-scale rocket using, 3D printed parts, and an avionics system on an Arduino nano
- Designed an avionics bay in Solidworks to house an Arduino nano, altimeter, and a battery that could slide inside our rocket and stay secured

Hermes Avionics | Rocket Propulsion Lab September 2023 - Present

- Assisted in developing the avionics bay to create a system that could transmit/collect data and release recovery parachutes for the organization's solid propellant rocket
- Developed code for various sensors on Arduino and ESP32 in C++ for flight data collection of altitude, temperature, location, and acceleration to be transmitted via radio/stored in an SD card
- 3D printed avionics system parts, soldered wires/cables and various components onto PCBs
- Conducted hands-on testing/troubleshooting for sensors and ejection system to ensure wiring and Arduino/ESP32 code worked properly

Radio Telemtry Tracking | E4E November 2024 - Present

- Worked in a research project team called Engineers For Exploration to help develop technologies for local organizations like the San Diego Zoo
- Sketched and designed an updated CAD with Solidworks for our drone payload to house different electrical components and manage wiring for the RTT project

Line Following Robot November 2022 - December 2022

- Developed a small robot with a team of four to navigate through tracks of black tape using photoresistors, with our design excelling at speed/accuracy in looping tracks
- Designed a chassis for the robot using onshape to be able to hold more components together and a shield portion to prevent external light from interfering with the photoresistors
- Wired and soldered the circuit boards with the Arduino to help create the electronics for the robot

Skills

Programming: C, C++, Java, MATLAB, HTML/CSS, LaTex, SystemVerilog
Technical: LTspice, 3D printing, Arduino/ESP, CAD Onshape, Solidworks, Git, Microsoft Office
Equipment: Function generators, Oscilloscopes, Multimeters, Soldering irons, Power Supplies