Yves Mojica

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Objective

Computer Engineering major with coursework focus on Embedded Systems and Digital/Analog Circuits, looking to apply for summer 2025 internships.

Education

University of California, San Diego | San Diego, CA *September 2022 – (Expected) June 2026*
Bachelor of Science in Computer Engineering, GPA 3.16/4.0

Projects

Rocket Propulsion Lab | San Diego, CA *October 2022 - Present*

NMP Member

- 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 to produce a functional small-scale rocket
- Designed an avionics bay in Solidworks to house an Arduino nano, altimeter, and a battery that could slide inside our rocket.

Hermes Avionics Engineer

- Assisted in developing the avionics bay to create a system that could transmit/collect data and release recovery parachutes for a larger-scale solid propellant rocket.
- Developed code for various sensors on Arduino 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, hand-soldered pins for sensors, and components for the PCB of our ejection system
- Conducted hands-on testing/troubleshooting for sensors and ejection system to ensure wiring and Arduino code worked properly.

Radio Telemetry Tracking/E4E | San Diego, CA *November 2024 - Present*

Hardware Member

- 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 for our drone payload to house different electrical components and manage wiring.

Line Following Robot | San Diego, CA *December 2022*

Team Member

- Developed a small robot with a team of four in 2 weeks 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
- Built a final website for the project/course that acted as a detailed report that highlighted the functional specifications of our project through video and text

Skills

Programming: C, C++, Java, MATLAB, HTML/CSS, LaTex, SystemVerilog
Technical: LTspice, 3D printing, Arduino/ESP32, CAD Onshape, Solidworks, Git, Microsoft Office
Equipment: Function generators, Oscilloscopes, Multimeters, Soldering irons, Power Supplies