

# Dereck Rubio

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## EDUCATION

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University of California, Los Angeles

Class of 2026

Electrical Engineering B.S.

Undergraduate Coursework: Circuit Analysis (Honors), Circuits Laboratory, Signal Processing, Digital Logic Design of Systems, Differential Equations, Linear Algebra and Applications, Data Structures and Algorithms

## SKILLS

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Technical Skills: Python, C++, MATLAB, Arduino, Circuit Design/Simulation, CAD, Excel, Sheets, FPGA Layout: Altium, SystemVerilog, Multimeter, Oscilloscopes, Voltmeter, Soldering, PCB Assembly, Hardware Design

Language Skills: English and Spanish

Security Clearance: **Secret**

## PROFESSIONAL TECHNICAL EXPERIENCE

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**Engineering Intern, Northrop Grumman Aeronautics : SA&S STRIKE Team**

June 2023 - August 2023

- Designed a software graphing tool utilizing **MATLAB** that worked directly with the software **AFSIM**.
- Graphing software was able to minimize analysis on data collected by **6 hours** per simulation.
- Participated in an **Agile Scrum** work environment that involved gaining knowledge of many different projects in my sector

**IT Support Technician, UCLA Law School**

July 2023- Current

- **Deploying and Intuning Machines** to classrooms or faculty of the UCLA Law School
- Deal with software issues on **drivers and hardware components** of Mac, Windows, Printers, etc.
- Experience writing **Bash Scripts and Powershell scripts** for removal of software and faster installation
- Established an **Asset Management system** utilizing **Freshservice** and **Excel** that streamlined deployment of Monitors, Desktops, Laptops, etc.
- Created **workflow-enhancing automations** to optimize user assistance in a **Microsoft/Windows** Environment

## ACTIVITIES / LEADERSHIP

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**Electronics/Avionics Lead, UCLA AISES Bearospace**

May 2024- Current

- Designing/Building an Avionics Bay and Recovery System for a Rocket to be launched **4000 feet**
- Utilize an **RDC3** to determine pressure to deploy the recovery system
- Design a **GPS System** to track the rockets surrounding components and payload throughout the rocket
- Handle **Workshops, Trainings, and Socials** for new/returning members. Lead a team to help build the entirety of the Avionics System

**Project Manager, Engineering 96 : Electrocardiogram**

September 2022- December 2022

- Designing, building, and wire circuitry of a functioning Electrocardiogram over the course of **3 months**
- Scientific journal entries **weekly** to maintain understanding of the **3 hour course**
- Learning **C++** over **6 hours** to be able to code the actual device, and be able to get the heart rate

**Project Manager, Engineering 96 : Underwater Robotics**

January 2023 - March 2023

- Main designer of the robot model, utilizing **SolidWorks**, 3D prints, and PVC pipes.
- Utilized an **8 motor system**, designed two circuit boards to be able to run all motors.
- Fastest time across the **25 yard pool in under 45 seconds**. Completely automated.
- Set up weekly meetings with my team, and when necessary daily check in phone calls.

**Member, Bruin Supermileage Powertrain Subteam**

September 2022 - Current

- Reused and Built an entirely new circuit board for a new EV vehicle
- Crimped wires and used a buck converter to lower the voltage to designed specification
- Designed, soldered and tested a motor controller using **Altium** software
- Build a new EV vehicle, from the ground up in a time span of **6 months**

**Member, Rocket Project Recovery Electronics**

December 2022 - September 2023

- Studying and wiring Altimeters, RDC3, to determine certain pressure to deploy dual parachutes
- Determining altitude and pressure for the rocket to start redeployment