

# Nestor Ojeda

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## Education

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**University of California Irvine**

June 2022

*Bachelor of Science in Mechanical Engineering, Specialization in Design of Mechanical Systems*

Irvine, CA

## Experience

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**Systems Integration Engineer**

May 2022 – Present

*Terran Orbital*

Irvine, CA

- Assembled, Integrated, Tested and Led production of vehicles for Space Development Agency's Tranche 0 Transport Layer and other satellite buses ranging from 12U CubeSats (25kg) to Small Satellites (450kg)
- Operated and maintained environmental test systems for vehicle/components (Vibration, Thermal, TVAC, etc.)
- Presented vehicle/component behavior issues to Engineering Review Board and led investigations by debugging and driving to determine root cause
- Collaboratively worked with team members to produce procedures for space vehicle assembly/test
- Owned and led integration/test campaigns at various levels of spacecraft development by communicating progress, challenges and opportunities to engineering and leadership in a clear and effective manner

**R&D Junior Project Engineer Intern**

Sep 2020 – Jul 2021

*Bal Seal Engineering*

Lake Forest, CA

- Improved automated rotary fixtures by analyzing electric schematic and debugging control system
- Designed in SolidWorks and manufactured a 3D-printed mount for a rotary encoder to track motor
- Programmed Arduino Mega to wire emergency system using an 8-channel relay module and MQ-2 gas sensor

**Team Lead/Foods Associate**

May 2018 – Aug 2019

*Cedar Fair Entertainment*

Santa Clara, CA

- Communicated with hundreds of guests per day as a cashier while serving and preparing food
- Assisted coworkers with maintaining the building and preparing the food while also keeping them motivated
- Supervised the building as Team Lead and planned schedules for associates while teaching them about the position

## Projects

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**Bandsaw Blade Guide UX Senior Design Project**

Sep 2021 – Mar 2022

*SolidWorks (CAD & Simulations), 3D printing (FDM), Bill of Materials, Bandsaws*

- Improved the blade guide design for Laguna Tool's bandsaw using SolidWorks to add less costly features by 20%
- Implemented self-locking worm gear to allow more precise adjustments and easier adjustability below the table
- Fabricated 3D-printed thrust bearing and blade guide using PLA High and Nylon to prototype on the bandsaw

**Golf Ball Launcher Design Project**

Jan 2022 – Mar 2022

*SolidWorks (CAD & Simulations), 3D printing (FDM), Arduino, MATLAB, GD&T, Wiring*

- Manufactured an automatic golf ball launcher that can land ball in bucket between 10ft. and 20ft. at a fixed height
- Designed in SolidWorks launcher that uses rack and pinion to control the launch angle and the release mechanism
- Programmed in MATLAB to output angle (0°- 60°) for the launcher and for Arduino release mechanism
- Manufactured using 3D-Printed methods (FDM) and wired laser, braking sensors, and servos to Arduino

**UCI Solids & Liquids Rocket Project**

Sep 2020 – Sep 2021

*Open Rocket, Arduino, MS Excel, Bill of Materials, SolidWorks (CAD), Wiring*

- Designed a multistage rocket in OpenRocket to reach 50,000 ft and created bill of materials for concepts
- Assembled a Flight Computer using barometric sensors, breakout boards and programmed in Arduino
- Designed a 3D-model of the multistage rocket in SolidWorks considering various pressures and forces analyzed

## Technical Skills

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**3D CAD/FEA:** SolidWorks (CAD & Simulations), CATIA, Fusion360, AutoCAD, Siemens NX, GD&T

**Software:** MATLAB, Arduino, Python, Microsoft Office (Word, PowerPoint, Excel), LabVIEW, JIRA, Ubuntu

**Hardware:** 3D Printing (FDM & SLA), Soldering, MIG Welding, Mills, Lathes, Bandsaws, Sanders, Drilling, Wiring

**Equipment:** PSU, DMM, Oscilloscope, DC Load, Thermal/TVAC Chamber, DAQ, Torque Wrench, Calipers

**Certifications:** CSWA Mechanical Design - Certified in SolidWorks - Issued in January 2021 ID:C-EWRZCV326G