

Nestor Ojeda

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Experience

Junior Project Engineer | Bal Seal Engineering | Lake Forest, CA **Sep 2020 – July 2021**

- Improved automated rotary fixtures for seal pressure testing using SolidWorks to reduce manufacturing times by 10%
- Designed in SolidWorks and manufactured a 3D-printed mount for a rotary encoder to track motor going 16000 RPM
- Analyzed rotary fixture control box schematic and soldered the motor system wires into running on 240 Volts
- Programmed Arduino Mega to wire emergency system which includes smoke detector, stack light, etc.
- Fixture is used to obtain reliable data for seal life estimation, improvement of materials, and validation of seal designs

Researcher | Martini Research Group | Merced, CA **Jan 2020 – March 2020**

- Examined the wear caused on the steel and ceramic balls that were subject to heat, torque, and friction using FEA
- Investigated various lubricants to minimize friction and wear by 20%

Team Lead/Foods Associate | Cedar Fair Entertainment | Santa Clara, CA **Summer 2018/Summer 2019**

- Communicated with hundreds of guests per day as a cashier while serving and preparing food
- Assisted my coworkers with maintaining the building and preparing the food while also keeping them motivated
- Supervised the building as Team Lead and planned a team of five associates' schedules

Projects

Bandsaw Blade Guide UX Design Project | Safety Lead **Sept 2021 – Present**

- Improved the blade guide design for Laguna Tool's bandsaw using SolidWorks to add less costly features by 20%
- Monitored safety standards, inspected tools equipment for accident prevention, and raised safety concerns in designs
- Presented concepts in Power Point as a team of five with each having an analysis of the benefits and weaknesses
- Designed thrust bearing and side guide designs using SolidWorks that increase surface area by 50%
- Manufactured 3D-printed thrust bearing using PLA High and Nylon to prototype in the bandsaw

UCI Solids & Liquids Rocket Project **Sep 2020 – Sep 2021**

- Designed a multistage rocket in OpenRocket to reach 50,000 ft (15,240 m)
- Assembled a Flight Computer using barometric sensors, breakout boards and programmed in Arduino IDE
- Designed a 3D-model of the multistage rocket in SolidWorks considering various pressures and forces analyzed

Machine Workshop **Jan 2020 – March 2020**

- Operated multiple machines such as a mill and lathe to cut a raw piece of aluminum into a desired shape and size
- Learned how to interpret CAD drawings and make those modifications using a mill, lathe, sander, and drill press

Yosemite Balsa Wood Bridge **Oct 2019 – Dec 2019**

- Designed a truss style Warren bridge in AutoCAD using method of joints with a team of four
- Budgeted under strict guideline of materials while calculating where tension and compression occurs using Excel

Skills

Software	SolidWorks, AutoCAD, Fusion360, MATLAB, Excel, Python, Arduino, Finite Element Analysis
Hardware	3D Printing (Plastic), Soldering, Mills, Lathes, Bandsaws, Sanders, Drilling, CNC Mill, Wiring
Certifications	CSWA Mechanical Design – Certified in SolidWorks – Issued in January 2021 ID:C-EWRZCV326G

Educational Background

University of California Irvine Irvine, CA	June 2022
Bachelor of Science, Mechanical Engineering – <i>Specialization in Design of Mechanical Systems</i>	GPA: 3.3