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 (FEA)***
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 – ***Specialization in Design of Mechanical Systems*** GPA: 3.3