Nestor Ojeda

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Experience

R&D Junior Project Engineer | Bal Seal Engineering | Lake Forest, CA **Sept 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 using an 8-channel relay module and MQ-2 gas sensors
- Added a functional smoke detector, stack light and emergency stop button system to ensure safety standards

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 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 5 associates' schedules

Projects

Bandsaw Blade Guide UX Design Project | Irvine, CA **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 PowerPoint as a team of 5 with each having an analysis of the benefits and weaknesses
- Designed thrust bearing and side guide designs using SolidWorks that decrease user adjustability time by 30%
- Manufactured 3D-printed thrust bearing and blade guide using PLA High and Nylon to prototype on the bandsaw

Golf Ball Launcher Design and Manufacturing Project | Irvine, CA **Jan 2022 – March 2022**

- Manufactured an automatic golf ball launcher that can land golf ball in bucket between 10ft. and 20ft. at a fixed height
- Designed in SolidWorks a golf ball launcher that uses servos to control the launch angle and the release mechanism
- Programmed in MATLAB to output angle (0°- 60°) for the launcher and for Arduino to power the release mechanism
- Manufactured using 3D-Printed methods (PLA) and wired laser, braking sensors, and servos to Arduino nano
- Team of 6 produced BOM and concepts to fabricate a design to be manufactured using 3D printer and drill presses

UCI Solids & Liquids Rocket Project | Irvine, CA **Sept 2020 – Sept 2021**

- Designed a multistage rocket in OpenRocket to reach 50,000 ft (15,240 m) and created bill of materials for concepts
- 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

Yosemite Balsa Wood Bridge | Merced, CA **Oct 2019 – Dec 2019**

- Designed a truss style Warren bridge model in AutoCAD using method of joints with a team of 4
- Budgeted under strict guideline of materials while calculating where tension and compression occurs using Excel
- Prototyped a balsa wood bridge model measuring 10in. by 10in. by 7in. to withstand 270 Newtons of load on the deck

Skills

3D CAD/FEA: SolidWorks (CAD & Simulations), AutoCAD, Fusion360, On Shape, Siemens NX

Software: MATLAB, Python, Arduino, Microsoft Office (Word, PowerPoint, Excel), HTML/CSS

Hardware: 3D Printing (Plastic), Soldering, Mills, Lathes, Bandsaws, Sanders, Drilling, 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