Alfredo Gonzalez Ruiz

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EDUCATION

University of Southern California   Graduation: Dec 2018

Bachelor of Science in Mechanical Engineering

ABILITIES AND SKILLS

Technical Skills:
- 2D & 3D modeling, CAD Sketching, Finite Element Analysis, Bill of Materials (Solidworks / NX)
- Programming, GUI, Dynamic System Modeling, data processing (Matlab / Simulink / Excel)
- Python, JavaScript, Windows, Linux, Mac, Raspbian, connected devices

Languages: Fluent in Spanish

WORK EXPERIENCE

Ground Up Logic   **Los Angeles, CA**

Server Technician / Developer   July 2019 – Present
- Develop prototype of smart/connected office building management company needs to integrate smart/connected devices with their office spaces
- Led effort to build and test a prototype system using that can collect and communicate real-time information about the office space via the internet

Environmental Team & Associates   **Anaheim, CA**

Environmental Compliance Officer   Mar. 2019 – Oct. 2019
- Industrial client was being fined $110000 for increasing waste water discharge into sewer more than 10-fold in a single year
- Collaborated with LA County Sanitation District to reduce clients water usage by redesigning the manufacturing process
- Reduced fine over 80% and waste water discharge over 60% without decreasing production

Carlton Forge Works   **Paramount, CA**

Maintenance Engineer   Feb. 2018 – July 2018
- Created 3D models of forging machines from blueprints and measurements, utilized for creating replacement parts and communicating issues
- Designed and implemented a safer feeding system for the sheet rolling step in the manufacturing process
- Saved company over $50k by updating requisition system, eliminating material buildup and coordinating with workers to use existing inventory

Northrop Grumman Aerospace Systems   **Redondo, CA**

Systems Integration & Test Intern   May 2015 – Aug. 2015
- Tested and validated materials to be used in spacecraft components. Testing involved mechanical and electrical tests to ensure reliability of materials
- Supported the structural design team developing 3D models of aircraft components and conducting stress simulations on models

Technical Intern   May 2016 – Aug. 2016
- Aircraft develop microscopic cracks thru load cycling during use. Collarborated with a small team to develop a tool for identifying specific aircraft components at the end of their fatigue life
- Developed a program that takes the CAD model of aircraft, age, and fatigue damage to determine what parts should be replaced; saving money and extending the life of aircraft

PROJECT EXPERIENCE

3D Printed Dog-Inspired Robot   2018
- Designed mechanical structure and pulley mechanism of robot, to meet size and weight constraints
- Manufactured parts using 3D printing and laser cutting, iterated design
- Test and integrated robot with electrical system to mimic the cadence and gait of a german shepard, our team was recognized for creating the best robot in class