Armando Chavez

armando.c.842@gmail.com • 602-329-0552 • US Citizen • Engineering_Portfolio_Link

Education

Arizona State University, Tempe, AZ

Bachelor of Science in Engineering, Mechanical Engineering — May 2020

Dean's list Spring 2018/2019. New American University National Scholar — GPA: 3.29/4.00

Related Experience

Process Engineer: *Intel Corporation Ocotillo, Arizona May 2020 – Present*

- Collaborate with suppliers/vendors for troubleshooting mechanisms/robots in wafer handling etch machines
- Researched and outsourced machine equipment for cost savings of refurbished and cleaned parts (lid stacks, rf generators, lift pins, robot arms, bearings, O-rings, electrical components, gas valves etc.)
- Analyze factory data using JMP to support cost reduction programs and machine hardware conversions
- Investigate chemical composition of defects to understand root cause during the manufacturing process

Process Engineering Intern: *Intel Corporation Ocotillo, Arizona June 2019 – May 2020*

- Programmed SQL scripts to pull raw data and plot using JMP to reduce 50% of unnecessary notifications

Mechanical Engineering Intern: *GoX Labs Tempe, Arizona May 2018 – May 2019*

- Designed wearable cases that met comfort, strength, and IP-67 water resistance requirements for daily use in construction sites to collect motion data from construction workers for improved ergonomics
- Researched, designed, and manufactured silicon molds to take advantage of polyurethane strength characteristics to move production away from 3D printed PLA materials
- Coached/trained new interns how to continue the fabrication process using the methods I developed

Carl Hayden High School, Falcon Robotics Mechanical Lead and Mentor: *Phoenix, Arizona 2012 – 2019*

- Designed and manufactured land/underwater robots for high school and collegiate competitions (FRC, AUVSI) which were both tele-operated and autonomous

Academic Projects

Arizona State University, Tempe, AZ — August 2019 – May 2020

Capstone: Retractable Vehicle Shade

- Calculated spring force/gear ratios based on fundamental engineering principles to ensure proper fabric alignment from housing to cover entire vehicle.
- Assessed and tested the structural design of the outer housing using Finite Element Analysis to determine if the mounting locations would deform under stress.
- Drafted detailed drawings in SolidWorks of rotating spring mechanism assembly that were sent to ASU's machine shop to be manufactured.
- Performed trade study based on design requirements to determine what fabric material would be most effective in reflecting heat while adhering to budget constraints

Combustion Project: Biomass pellet burner

- Worked as emissions subject matter expert to aid in the development of a biomass burner by ensuring that NOx emission was minimized
- Developed a novel biomass burner that would save customers over 1000$ a year over traditional burners

Skills

- Design and Applications: SolidWorks (Over 2000 Hours), Autodesk Fusion 360, ANSYS Stress Analysis, electrical circuit LTspice, Microsoft Office suite (Word, Excel, PowerPoint etc.)
- Programming: JMP statistical Analysis, SQL, MATLAB, Python, Java (AP), Computer Numeric Control (CNC) in multiple programs
- Machine Shop: 3D printing FDM/SLA with multiple composite materials, multi-axis CNC router/mill, laser cutting, GD&T, micrometer/calipers/gauge block-pins, bandsaw/mill/lathe etc.
- Languages: Fluent in oral and written English; Fluent in oral Spanish and intermediate writing