## Ali Alliyani

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#### **EDUCATION**

Majors: Mechatronic Engineering & Mechanical Engineering Minor: Computer Engineering

Graduated, December 2018

California State University, Chico

#### **TECHNICAL SKILLS**

Programs: SolidWorks, PSpice, OrCAD, MATLAB, AutoCAD, Raspbian, Timer Pro, T.K. Solver, LabView, Eagle CAD, Microsoft Office Suite

Coding Languages: Ladder Logic, C, C++, Python, Assembly Language, Java, HTML Bilingual: English & Spanish

#### WORK EXPERIENCE

#### **Manufacturing Mechanical Engineer** NxEdge

- Organized the layout of the facilities polishing room and with a team we designed the room to be explosive proof • following NFPA guidelines.
- Designed, developed, and implemented a 120V step down to a 24V leak detection system for the plating process floor.
- Analyzed, prototyped, and tested a custom lid for plating tanks that can retain/recycle vapors and maintain a constant warm temperature for the chemicals so that it would reduce electric heater usage.
- Ran meetings every morning with maintenance team to coordinate tasks, organize plans and hold discussions about facility issues.
- Designed an overflow float jig that operators can use to not overfill chemical tanks with deionized water.
- Created an interactive spreadsheet map of process tanks in the facility that when a tank is clicked, details of accessories, temperatures, chemical mixtures and tank dimensions appear.
- Made repairs on the process line when needed, such as trouble shooting 240V (3 phase) and 480V (3 phase) controller boxes that regulate heaters to set temperatures.

#### **Field Service Engineer**

#### Kawasaki Robotics (U.S.A.) Inc.

- Troubleshoot and test various robots, as well as monitor and track their failures and other irregularities. •
- Verify the reported issues, document the steps to reproduce and validate the solution/fix.
- Analyze and provide solution support across customer production site.
- Assisted in reorganizing and designing new working bays and the layout of the lab floor while implementing 5S organization method.

#### **Mechanical Engineer Intern**

### **Bell Carter Olive Packing Company**

- Conducted time studies on four packing lines and their equipment to determine the lag time and efficiency. •
- Compiled time study data on Excel and calculating the overall equipment effectiveness (OEE) of the machines. •
- Validated the hiring of more operators for each line. ٠

### **Mechanical Engineer Intern**

**Fresenius Medical Care** 

- Collaborated with a team to improve worker efficiency and reduce waste or error of an assembly line by 20%. •
- Designed a cart that carries 40% more finished products, improving workspace on the production floor.
- Recorded time studies to improve production floor takt time.

#### **TECHNICAL PROJECTS**

#### Hitch Helper (Project Manager – Senior Project)

- Designed and developed with a team a prototype camera that assists customers hitch their vehicles with an app.
- Coded functions for a camera to target color badges and then calculate their distances. •
- Led the team to the best of my abilities as project manager to design and build a functioning prototype.

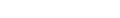
January 2019 - March 2020

September 2017 – March 2018 Corning, CA

San Jose, CA

#### Summer 2017

#### Concord. CA



Spring 2017 – Fall 2017

# San Carlos, CA

April 2020 – October 2020

#### Automated Packaging, Sealing/Cutting System

- Designed using a motor sizing method that calculates the total sum of inertia in the machines system to decide motor • selection, controller selection and motor drive (amplifiers) for the application.
- Designed and demonstrated proof of concept with motors, drivers, and controllers provided from the engineering • department.

#### Light Tracker Controls Project

- Monitored disturbances of the system and applied a controller to improve stability and reduce data interference. ٠
- Ranked P, I, and D controller inputs and reported the effectiveness of a PID controller.
- Created both frequency response and unit step response plots on MATLAB to analyze the input effects through filters. •

#### Automated Pneumatic Screwdriver

- Designed and automated a conceptual mechanical system using SolidWorks. ٠
- Programmed a logic controller (B&R PP35 control pad) for user to operate the automated system. •

#### AFFILIATIONS

Latinos in Technical Careers (LTC)	2012-2018
Web Master (2015-2016)	
Vice President (2016-2017)	
Mexican American Engineering Society (MAES)	2012-2018
Society of Hispanic Professional Engineers (SHPE)	2012-2018
American Society of Mechanical Engineers (ASME)	2013-2017
Vice President (2016-2017)	
American Institute of Mechatronics Engineers (AIME)	2015-2017
Vice President (2016-2017)	
National Society of Black Engineers (NSBE)	2014-2017

Spring 2013

Fall 2017