

Kyle Bartholomew

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EXPERIENCE **NovaSignal:** Mechatronics Design Engineer

Feb. 2018 – Present

Lead engineer for:

- Motor, encoder, and gearbox selection - Improved accuracy by 10x while maintaining cost and size constraints.
- 2-axis miniaturized gimbal - Reduced cost from previous gimbal design by 60%.
- Service life testing program - Reduced out-of-box failures by 80%.
- Robot accuracy testing program - Developed novel test method for 4 axis robot position measurement.
- Investigation of mechatronics related device malfunctions.
- Cable assembly design and testing.
- Shock and vibration testing.

Key team member for:

- Research and Development for future robotic devices.
- Mechanical and Electrical architecture development.
- Risk identification and mitigation through DFMEA and SLRA.
- Python test tool development.
- Firmware development.

Fayble Design: Co-Founder, CTO

Spring 2016 – Feb. 2018

Fayble Design created a simplified furniture buying experience. Customers could easily customize any of our designs on our website.

Created the business model, website, and marketing plan. Built a full size CNC router to manufacture our products.

WET Design: Engineering Intern

Summer 2015

Led computer simulation of new nozzle designs for The Wynn Vegas Hotel fountain using Ansys Fluent; Designed an underwater housing for the control electronics for the Wynn fountain; Designed and manufactured test fixtures for production lines.

Cal Poly Pomona Formula SAE: Design Engineer, Steering Captain

Jan. 2014 – Sep. 2015

Designed and analyzed a custom steering rack assembly; Determined steering kinematics points to improve performance and driver feedback; Manufactured the steering system; Participated in testing methodology design and vehicle dynamics simulation research.

Wrote software to analyze Deep Space Network performance and improve reliability. Used the Processing IDE, the Xcode IDE, Microsoft Excel, and MySQL.

EDUCATION **California State Polytechnic University, Pomona:** B.S. Mechanical Engineering
Graduation Date: *August 31, 2017* | Dean's List: *Fall 2013, Winter 2014, Spring 2017*

Leadership Positions:

Innovation Ambassador – Cal Poly Pomona Innovation Lab
Vice-President – Bronco Running Club
Steering Captain – Cal Poly Pomona Formula SAE

HONORS **1st Place at Hackpoly Hackathon** *Jan. 2014*

Worked on a team to develop an iPhone app that tracks a user's food and suggests recipes to make.

Two-time finalist in Bronco Startup Challenge *Mar. 2014 &*

Wrote a full business plan and gave a presentation on two different businesses. Selected as a finalist both years.

2016

SKILLS **Programming Languages**

Considerable experience: Python, Javascript, Objective-C, Arduino, HTML, CSS, VueJS, NodeJS/ExpressJS

Some experience: C/C++, MySQL, Simulink/SimScape, Matlab

Software: Autodesk Inventor, Solidworks CAD, Solidworks FEA, Siemens Femap, Ansys Fluent, HSMWorks CAM, Xcode, Git, AWS (EC2, S3, Lambda), Firebase

Mechanical Skills: CAD, Machine Design, CNC, FEA, CFD, Composites, 3D Printing, Mechatronics, Controls, Prototyping, GD&T, Design for Manufacturing