

# Kyle Bartholomew

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## EXPERIENCE

### **NovaSignal:** Mechatronics Design Engineer

*February 2018 - Present*

Responsible for:

- Motor, encoder, and gearbox selection for all devices.
- Next-generation robotic designs: research, prototyping, and mechanical design.
- Lifecycle testing program: design, development, procedure writing, and validation.
- Development of shock, vibe, and drop testing program.
- Robot accuracy testing program: Design, development, procedure writing, and validation.
- Multiple production cable assemblies: work with vendors to design and validate.
- Investigation of robotics related device malfunctions.

Participate in:

- Mechanical design of all subsystems.
- Firmware development.
- Python test tool development.
- Risk identification and mitigation through DFMEA and SLRA.

### **Fayble Design:** Co-Founder, CTO

*Spring 2016 – Summer 2017*

Fayble Design created a simplified furniture buying experience. Customers can 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.

### **Juna Accent Coach:** Lead iPhone Developer

*Summer 2014*

Developed the first version of an iPhone app that helps foreign speakers improve their American accents; Worked alongside a product manager, a linguist, an animator, and a web developer.

### **NASA JPL/Caltech:** Engineering Intern

*Summer 2012 & Summer 2013*

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

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**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

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**HONORS**

**1st Place at Hackpoly Hackathon:** Worked on a team to develop an iPhone app that tracks a user's food and suggests recipes to make. *January 2014*

**Two Time Finalist in Bronco Startup Challenge:** Wrote a full business plan and gave a presentation on two different businesses. Selected as a finalist both years.

*March 2014 and 2016*

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**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

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