

William Vennard

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Engineering Experience

GradientOne, San Francisco, CA

Front-End Web Developer

May 2015 - Present

- Established framework and performed research and development to create GradientOne's first viable product in addition to participating in both customer and investor presentations
- Developed UI for GradientOne's website using HTML, JavaScript, and libraries including Angular, Bootstrap and jQuery to aid in performance optimization and usability
- Designed virtual interfaces for an Oscilloscope and Power Meter capable of receiving live data through the cloud-computing platform Google App Engine
- Created detailed data visualizations for large-scale data analysis including histogram, linear regression, heat map and principal component analysis plots

Colorado Space Grant Consortium, Boulder, CO

Test and Systems Engineer, Senior Design - DeltaV/Sat

September 2015 - May 2016

- Design and manufacture a propulsion system for a cube satellite intended to compete in NASA's Cube Quest Challenge with the ultimate goal of achieving lunar orbit
- Prepare detailed test plan for variety of tests including vibration, thermal vacuum, proof pressure, contamination, and full system functionality tests
- Collaborate with CAD and manufacturing engineers to insure proper integration and compatibility of all system components
- Model and conduct finite element analysis on critical components using SolidWorks

Structural Engineer, HASP - HELIOS IV

January - May 2015

- Designed and manufactured components for a balloon satellite payload that flew in September 2015, successfully tracking the sun and recording thousands of images demonstrating the viability of solar observation on a high altitude platform
- Assisted in hardware testing, including system integration and azimuth axis control
- Completed payload structure two months ahead of schedule and logged over 100 hours of machine shop experience

UCS Spirit, Carson City, NV

Mechanical Engineering Consultant

May - August 2015

- Designed and installed deflection measurement machine for use in pole vaulting manufacturing plant incorporating a label/barcode printer to aid in inventory and distribution
- Increased accuracy of deflection measurement by an order of magnitude as well as simplified the manufacturing process resulting in a 50% decrease in cycle time
- Coordinated and led a team of two other engineers in order to leverage outside expertise

Education

B.S. Mechanical Engineering, University of Colorado Boulder
Cumulative GPA: 3.22/4.00

May 2016

Front-End Web Developer Nanodegree, Udacity

August 2016

Technical Skills

HTML/CSS, JavaScript, Angular, React, D3, LabVIEW, MatLab/Simulink, Excel/VBA, SolidWorks, Mill, Lathe, CNC, Band Saw, Laser Cutter, 3D Printer, MIG Welder, Waveform-Generator, Oscilloscope