ADAM WELD

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OBJECTIVE - Seeking a full time position in R&D working on challenging multidisciplinary projects. I thrive on fast iteration and outside-of-the-box thinking. Most interested in areas that synthesize of one or more of electronics, mechatronics, embedded systems, machine learning, and computer vision, and motion control.

EDUCATION

Cornell University B.S. in **Electrical and Computer Engineering - May 2019**

Electrical
- ❏ Schematic design and simulation, validation
- ❏ PCB layout and routing
- ❏ Digital and analog RF communications
- ❏ Microcontrollers and embedded systems

Mechanical
- ❏ SolidWorks modeling
- ❏ Materials properties, selection and testing
- ❏ Design for manufacture
- ❏ Statics and Dynamics
- ❏ Ansys FEA simulation
- ❏ Precision Tolerancing

Robotics
- ❏ Programming in C, C++, Python, MATLAB, BASH
- ❏ High Level design and subsystem integration
- ❏ Actuators, manipulators, sensors, and drivetrain
- ❏ Control algorithms

Manufacturing
- ❏ Supply Chain / OEMs
- ❏ CNC milling/waterjet
- ❏ Rapid Prototyping
- ❏ 3D Print / Laser Cut
- ❏ Injection molding
- ❏ Precision soldering
- ❏ SMD reflow/rework

PROFESSIONAL EXPERIENCE

HoverBot.io
10.2016 - Present
Seattle, WA
Founder and CEO

- ❏ Launched drone company with industry-leading performance in ultralight racing market.
- ❏ Lead Research and Development on custom BLDC motors, Carbon Fiber Exoskeleton design, STM32-based flight control electronics, LIDAR subsystem, flight testing and qualification.
- ❏ Achieved best-in-class noise performance, durability, safety, wind resistance, size and weight.
- ❏ Coordinated manufacturing logistics, distribution, marketing, and customer support.

Amazon Prime Air
05.2017 - 09.2017
Seattle, WA
Hardware Design Internship

- ❏ Took ownership of flight critical sensor subsystem and researched dozens of white papers.
- ❏ Worked with team members and leadership to identify areas needing improved performance.
- ❏ Created test plans, physical rig and fixturing, and scripting to document the precision and accuracy of numerous possible replacement sensors and characterize their behavior.
- ❏ Designed a densely populated six-layer printed circuit board in Altium from schematic to layout using integrated ECAD/MCAD techniques, and performed board bring-up and testing.
- ❏ Engineered and manufactured a weather-sealed enclosure for subsystem.

Vantage Robotics
05.2016 - 08.2016
SF Bay Area, CA
Hardware Design Internship

- ❏ Designed and tested PCB with FTDI and pogo-pin interface for debugging and development.
- ❏ Fabricated programming, manufacturing, and assembly jigs for production with CM / OEM.
- ❏ Created three-axis ball bearing test stand with .01 degree repeatability to calibrate camera firmware and digital image stabilization algorithm.
- ❏ Redesigned components for manufacturability and cost reduction.
- ❏ Prototyped WiFi repeater handset and implemented video pass through functionality.

Project Voxa
05.2015 - 09.2015
Seattle, WA
Hardware Design Internship

- ❏ Designed electromechanical positioning subsystem for an electron microscope, from conceptualization to the fabrication of a working production prototype.
- ❏ Gained experience in vacuum systems and cleaning procedures and materials selection.
- ❏ Modeled and simulated precision flexure assembly for EDM machining out of Titanium.
- ❏ Designed, built, and tested custom nanoscale piezoelectric linear actuators and prototyped precision four-axis linear motion system.

University of Washington
04.2013 - 03.2014
Seattle, WA
Robotics and State Estimation Research

- ❏ Assisted in the creation of a mobile Robotic Assistant for the Visually Impaired
- ❏ Performed component selection, wrote software, and handled subsystem CAD design work, sensor placement, and connecting structure architecture.
- ❏ Researched and helped implement (in ROS) visual object recognition, semantic world knowledge system and natural language processing programs.
- ❏ Incorporated real time video, RGBD cameras, and laser scanning technologies into feedback and controls structure.

PROJECTS AND CLUBS

CUAir Project Team - Electrical

Cornell Maker Club - Lab Manager

Cornell RPL - Lab Manager