Robert Halvorsen

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I am a creative engineer with a passion for high impact problem solving. I develop empathic solutions that address compelling needs.

Education

Carnegie Mellon University, Pittsburgh, PA
Master of Integrated Innovation for Products and Services
Solving high-impact problems at the intersection of engineering, design, and business.
May, 2019

Dartmouth College, Hanover, NH
Bachelor of Arts: Human Centered Design
Bachelor of Engineering: Mechanical
GPA: 3.57/4.0
June, 2017

Middlebury College, Lake Tahoe, NV
MiddCORE: Leadership and Design Development
Immersed in strategy consulting, project management, and product design.
June, 2014

Areas of Expertise

Human Centered Design
Ethnographic research methods
Need finding and brainstorming techniques
Story boarding, journey mapping

Internet Of Things
Arduino expert, rapid digital prototyping
Circuit design, electrical diagnostic equipment
Sensing, actuation, data collection

Mechanical Engineering
Certified SolidWorks Professional
Sheet metal, injection molded plastics
Linkages and novel mechanisms
Robotics, DC and servo motor control

Programming
Solid fundamentals, able to learn any new language
C, Python, Ruby, Swift, SQL, Matlab, LabVIEW
Self-taught iOS development

Prototyping
At home in any machine shop or maker space
Laser Cutting, 3D Printing, soldering, wood working
Manual and CNC Mill, Lathe

Professional Experience

Mechanical Design Engineer, *Goddard Technologies, Inc.* **June 2019 – Present**
Goddard Technologies is a full service engineering and industrial design firm that specializes in the design and development of medical, consumer, and industrial products

- Full ownership of design and development cycle for novel tennis product. Received garage prototype, delivering manufacturable design with improved structure and function. Requirement definition, brainstorming, down selection, prototyping, testing, and iteration. Identifying manufacturers, procuring quotes. Managing client relationship.
- End-to-end development of foam overmold sheet metal bracket for improved associate safety at Amazon Fulfillment Centers. Identified ergonomic improvements, executed design intent, and developed relationships with manufacturers. EAU 6000 pcs nationally. Co-designing with international team for release in other regions.
- Re-designed part-level and system-level features for Amazon Robotics and the stations that interface between human operators and autonomous robots. Worked with large assemblies and PDM. Utilized GD&T, tolerance analyses, and FEA.
- Leads meetings with management and suppliers to align designs, decisions, and goals.

Machinist, *Carnegie Mellon Machine Shop* **Fall 2018**

- Machined parts on the manual and CNC Mills and lathes for research groups on campus.

Design Fellow, *Thayer School of Engineering* **July 2017 – June 2018**

- Co-designed and delivered a six-day design thinking workshop for Inspire Africa's Train the Trainers program in Sapele, Nigeria.
- Developed and refined mechanical design of eating-detection wearable for intercollegiate obesity research through collaboration with teams from Dartmouth, NYU, and Clemson. US Patent App 62/712,255: Detecting Eating Episodes with An Ear-Mounted Sensor.

Product Engineering Intern, *Analog Devices, Inc.* **June 2016 – Aug. 2016**

- Designed, built, and programmed (LabVIEW) novel test equipment to precisely rotate MEMS gyroscopes within specific test protocol, improving measurement accuracy by 3X.

Project Manager, Developer, *Neukom DALI Lab* **Sept. 2015 – March 2016**

- Managed a team of three to build an iOS app for biofeedback running shoe insert.
- Converted NASA's disk-based crisis management program into a web-based client.

Projects

Droopy - Teen Sleep Aid, Carnegie Mellon*, team of 3* **Fall 2018**
Won Philips Design Challenge with a minimal bedside companion developed with teens struggling with sleep. Rigorous user research, iteration, and lo-fi prototyping.

Haptic Night Terror Wearable, *Independent Passion Project* **Winter 2017 – Spring 2018**
Invented novel sleep tracking wearable utilizing haptic feedback to help manage night terrors. Built Arduino wrist-mounted device and developed an iPhone and Apple Watch app.

Pediatric Device, *Thayer School of Engineering, team of 5* **Fall 2016 – Winter 2017**
Developed thermal regulation solutions and led mechanical design for clinical, non-invasive, handheld, infant body iron measurement device with Lodestone Biomedical.