

STUART HELGESON

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EDUCATION

University of Pennsylvania, School of Engineering and Applied Science

Philadelphia, PA

Candidate for Bachelor of Science in Engineering

May 2016

Major: Mechanical Engineering & Applied Mechanics *Minor:* Mathematics

Relevant Coursework: Engineering Econ, Mechatronics, Intro to Mechanical Design, Machine Design and Manufacturing, Vibrations of Mechanical Systems, Control Systems, Design for Manufacturability, Needfinding

Hempfield High School

Lancaster, PA

Honors and Activities: National Honor Society, Brookes Student Athlete Award, PLTW Design Competition (Best Design) June 2012

Academic All-American (Lacrosse, Captain), All-League Honorable Mention (Football, Captain)

EXPERIENCE

University of Pennsylvania, GRASP Laboratory, Haptics Lab, Undergraduate Research Assistant

Philadelphia, PA

Working on a joint project with Berkley, funded by the National Robotics Initiative to build a system to collect visuo-haptic data for a database to be used for machine learning Summer 2015-Present

- Created a smart dock that interfaced with a Linux based system to determine which end effector was collecting data
- Designed and built a portable data collection system that fits into a backpack
- Collected force data with various sensors, analyzed and visualized data with MATLAB
- Created instruction manual explaining how the device works and how to use it

Freelance Product Designer

Philadelphia, PA

Recommended by professor to partner with a Penn Vet Student seeking engineer to create a consumer product 2014-Present

(<http://www.google.com/patents/US8464662>)

- Worked with client to bring his idea to life
- Combined mechanical, electrical and design skills to develop a working prototype of the device
- Devised way to automate the device
- Ordered and documented all purchases necessary for the project; created multiple BOM's
- Produced videos demonstrating product (<https://www.youtube.com/watch?v=RCfVBhlaPbU>)
- Networked and organized investor meetings, working on a licensing deal

Vector Marketing, Sales Representative

Lancaster, PA

Sold Cutco kitchen products Summer 2012

Summer 2012

- Networked and made calls to set up appointments for potential customers
- Presented products in approximately 30 customers' homes
- Promoted twice for sales (sold over \$9,000 in merchandise)

Bernieri Construction, Crew Chief

Lancaster, PA

Worked summers and breaks during high school doing contracting work 2009-2011

2009-2011

- Started as a laborer and worked up to crew chief, was in charge of two other workers
- Performed demolition, masonry, kitchen and home renovation, and landscaping

EXTRACURRICULARS

Penn Varsity Sprint Football

- Captain, 4 Year Varsity letter winner
- 2 x 1st and 2nd Team All-League Honors

Hexagon Senior Society

- Engineering Senior Society that brings together prominent seniors across engineering majors
- Responsible for giving tours of the Engineering School

Penn Rugby Football Club

- Helped the team win its first City 6 Ruby 7's Championship
- Hoping to earn a bid to the CRC 7's National Tournament for Spring 2016

PROJECTS

Robockey: 4-man team created 3 autonomous hockey playing robots for 2014 tournament (www.robockey.com)

Cruise Control: used an iPhone to remotely control a tiny car

Doodle Jump: made a version of Doodle Jump in MATLAB

Pixel: smart tag game

Vendawa: pharmacy in a box for underdeveloped countries

Programming: MATLAB, C, HTML5, CSS, JavaScript

Software: SolidWorks, Inventor, AutoCAD, Photoshop, Illustrator
Microsoft Office

Skills: Manufacturing (metals, composites, wood), Rapid Prototyping (Laser cutting, 3D Printing)