Trevor Hoffman

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EDUCATION

B.S., Mechanical Engineering, Carnegie Mellon University, Pittsburgh, PA — Graduated August 2017

PROFESSIONAL EXPERIENCE

Carnegie Mellon University, Pittsburgh, PA — September 2016 – August 2017
Research Assistant, Jayan Lab (June 2017 – August 2017)
Lab Manager, Design Lab (September 2016 – May 2017)

- **Lab Management –** Managed lab safety and organization to ensure design lab functionality.
- **Mentoring –** Supervised and mentored younger engineering students and helped with their course projects. Taught proper use of power tools and advanced students' knowledge of prototyping techniques.

Fortified Bicycle, Boston, MA *Design Engineer* — November 2015 – January 2016

- **Mechanical Design –** Improved the interface geometry between a proprietary security bolt and the corresponding wrench to address a quality issue.
- **Rapid Prototyping –** Tested validity of bolt head geometry by 3D printing scaled models of several designs.
- **Engineering Drawings –** Documented design changes across entire product family with 2D GD&T drawings enabling the designs to be easily interpreted during manufacturing.

Landry's Bicycles, Natick, MA *Sales Associate* — May 2015 – November 2015

- **Retail Customer Service –** Worked closely with customers to solve their bike-related problems they had.
- **Assembly and Maintenance –** Gained expert knowledge of bike components, brands, assembly and repair in order to more effectively troubleshoot and repair bicycles.

Aila (formerly Padlock), Natick, MA — Summer 2012 and Summer 2013

- **Custom Product Renderings –** Produced customized renderings of branded tablet docks in Solidworks for sales proposals to show off the product to potential clients.
- **Manufacturing Tablet Enclosures –** Assembled tamper-proof tablet cases for use in retail environments.

PTC, Needham, MA — June 2011 – August 2011

- **CAD Software Testing –** Tested software demos in Creo and Windchill ahead of a major software release.

ACADEMIC PROJECTS

Free-fall Activated Device Protection: — Spring 2017

- Led team of six engineers to develop a novel reactive smartphone case that used a sensor and micro-controller to detect free-fall and actuated twisting bumpers which protected the phone from all sides.

Design for Failure, Manufacture & the Environment (DFME): — Fall 2016

- Developed an electro-mechanical system to solve a challenging horticultural life support problem.
- Applied principles of DFME to design and manufacture of an adapter bracket for a mountain bike.

Engineering Design Projects: — Spring 2016

- Developed a simple conversion kit that added electric bike functionality to any existing bike.

Industrial Design Fundamentals: — Spring 2016

- Practiced perspective sketching, development of form, ideation, ergonomics and human factors.

Thermal Fluids Experimentation: — Spring 2015

- Designed a testing apparatus to test liquid crystal thermometer strips.

SKILLS

Design Skills: Mechanical Fundamentals, Finite Element Analysis, Industrial Design Fundamentals, Toolmaking

Engineering Skills: Solidworks, Mastercam, Matlab, Simulink, Rapid Prototyping, Arduino, Raspberry Pi, Ruby, C++

Other Software: Adobe Creative Cloud, Photoshop, Illustrator, Microsoft Office