# REID MOAK

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## EDUCATION

**University of Pennsylvania,** Philadelphia, PA — Anticipated May 2018
Master of Science in Mechanical Engineering, *GPA 3.30*
*Concentration: Heat Transfer, Fluid Mechanics, & Energy*

**University of Pennsylvania**, Philadelphia, PA — Anticipated May 2017
Bachelor of Science in Mechanical Engineering, *GPA 3.64*

## COMPLETED COURSEWORK

- Statics & Strength of Materials
- Dynamics
- Thermodynamics
- Fluid Mechanics
- Solid Mechanics
- Machining & Manufacturing Design
- Robotics
- Viscous Fluid Flows
- Vibrations of Mechanical Systems
- Heat & Mass Transfer
- Aerodynamics
- Energy Engineering

## TECHNICAL SKILLS

- FEA: COMSOL, ANSYS Fluent
- CAD: SolidWorks, Autodesk Inventor
- Prototyping: 3D printers, flatbed laser cutters
- Microsoft Office Suite
- Machining: Manual/CNC Mill, Lathe
- Coding: HTML, CSS, JavaScript, Git, MATLAB, Arduino, Python, Java

## WORK EXPERIENCE

**DroneCast,** Philadelphia, PA — Summer 2015
*An aerial advertisement company specializing in quadrotors.*
***Mechanical Engineering Intern & Team Leader***

- Utilized CAD and additive manufacturing skills to create custom parts for quadrotors
- Provided clients with extensive, hands-on instruction in the operation and flight of quadrotors
- Collaborated with seven team members to create solutions to design challenges provided by company partners
- Managed engineering team's projects for several weeks and ensured successful achievement of goals

**Camp Manitou for Boys**, Oakland, ME — Summers 2013 & 2014
*A premier sports and arts summer camp for boys ages 7-16.*
***Camp Counselor & Music Instructor***

- Supervised and coordinated activities for campers ages 11-12
- Facilitated expansion of music instruction into its own standalone program
- Provided guitar, drums, bass, and piano instruction for campers in the music program

## PROJECTS *(click on 'Portfolio' on **www.reidmoak.com** to see more extensive projects list)*

**ONE OTHER PROJECT** — May 2016 – Present

- **Blah**
- **Blah**
- **Blah**
- **Blah**
- **Blah**

**DrumPad** — March 2016 – May 2016

- Designed a portable drum pad made of Acrylic in SolidWorks
- Built an Arduino circuit that uses pressure sensors on the drum pad surface to record a beat from the user
- Incorporated Bluetooth communication between Arduino and PC in order to play back the recording
- Helped write signal processing code that determines the proper drum sound corresponding to user input

**Stirling Engine,** Manufacturing Design Lab — August 2015 – December 2015

- Machined parts for a Stirling heat engine from stock material
- Adhered to tight tolerances utilizing manual and CNC tools
- Created engineering drawings for custom components in SolidWorks
- Achieved maximum rotational speed of 1010 RPM

## ACTIVITIES

**Penn Ski Team**, Alpine & Freestyle Competitor — December 2014 – Present
**Phi Gamma Delta,** Brotherhood Chairman & House Manager — March 2014 – Present
**United States Parachute Association,** Skydiver (C-43805) & Coach — December 2012 – Present