# Kevin O'Neill

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## EDUCATION

**CARNEGIE MELLON UNIVERSITY**
MS in Mechanical Engineering
Expected Dec. 2020 | Pittsburgh, PA

**CARNEGIE MELLON UNIVERSITY**
BS in Mechanical Engineering
Minor in Political History
Expected Dec. 2019 | Pittsburgh, PA
GPA 3.35 out of 4

**PROVIDENCE ACADEMY**
HS Diploma with Honors
2012 - 2016 | Plymouth, MN
GPA 3.67 out of 4
National Honor Society Member

## LINKS

koneill.me
github.com/kevin4913
www.linkedin.com/in/oneillkevinj

## COURSEWORK

Engineering
- *24-370: Engineering Design 1*
- *24-441: Engineering Design 2*
- *24-351: Dynamics*
- *24-352: Dynamic Systems and Controls*
- *24-689: Modern Manufacturing*
- *24-262: Stress Analysis*
- *24-322: Heat Transfer*
- *24-231: Fluid Mechanics I*

Mathematics
- *24-311: Numerical Methods*
- *36-220: Engineering Statistics and Quality Control*
- *21-127: Concepts of Mathematics*
- *21-259: Calculus in Three Dimensions*
- *21-260: Differential Equations*

Computer Science
- *15-112: Fundamentals of Programming and Computer Science*
- *15-122: Principles of Imperative Computation*

## SKILLS

**MANUFACTURING**
Laser Cutting • 3D printing • Lathe • Mill • Drill Press • CNC Mill • Silicone Molding • MIG welding • soldering

**SOFTWARE**
SolidWorks • NX • PTC Creo Fusion 360 • Python • C • Matlab

## EXPERIENCE

**RELATIVITY SPACE** | Additive Hardware Intern
June 2019 – August 2019 | Los Angeles, CA
- Designed, manufactured, and tested equipment for print quality improvement in collaboration with weld engineers, material scientists, and automation engineers.
- Utilizing FEA, designed and manufactured large scale tooling allowing for 8 foot diameter prints given weight and deflection constraints.

**RELATIVITY SPACE** | Mechanical Engineering Intern
June 2018 – August 2018 | Los Angeles, CA
- Created mounting hardware and installed welding, grinding, and sensor equipment on the printer.
- Designed and sourced large scale tooling allowing for 7 foot diameter prints.

**GE ADDITIVE** | Engineering Intern
June 2017 – August 2017 | Cincinnati, OH
- Created a document that detailed standard operating procedures and safety hazards for a new metal powder printer. This document is now the template for future systems developed by GE Additive.
- Collaborated with other team members on calibration and build preparation on the proof of concept machine.
- Designed and manufactured a prototype for more automated powder removal from finished metal powder builds.

**EXOGONIC** | Co-Founder
January 2017 - Present | Minneapolis, MN
- In charge of physical design, prototyping, manufacturing, and communicating with hospitals and physical therapists

**DESIGN 1** | Undergraduate Teaching Assistant
August 2018 - Present | Pittsburgh, PA
- Developed new class project and designed and manufactured testing rig
- held office hours and recitations to assist students with course material, homework, and the class projects.

**CMU MAKERSPACE** | technician
January 2017 - Present | Pittsburgh, PA
- Maintained laser cutters, 3D printers, and machine shop and assisting students with projects.
- Utilized mills and lathes to manufacture high tolerance parts for labs on campus

## PROJECTS

**GRIPPER** | Design 1 Project 2
October 2018 - November 2018
- Collaborating with three team mates, we designed and created a gripper to hold an object during dynamic movement.
- By utilizing carbon fiber and other lightweight materials, we produced a gripper with a mass of 23.4 grams which was best in the class and over 17 grams lighter than the next gripper.

**BRACKET** | Design 1 Project 1
September 2018 - October 2018
- Designed and manufactured a laser-cut bracket to hold 25 lb of weight.
- Using Solidworks simulations as well as multiple prototypes, my bracket had a mass of 0.72 grams.
- My bracket was the lightest in the class of 120 by almost 10%