

# LEAH WALLACE

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**Citizenship:** United States of America • Canada

## EDUCATION

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**Princeton University**, Princeton, NJ

Class of 2017

*B.S.E., Mechanical & Aerospace Engineering,*

*Certificate: Robotics and Intelligent Systems*

**Coursework:** Engineering Design • Automatic Control Systems • Space Flight Dynamics • Space System Design • Rocket and Air-Breathing Propulsion Technology • Programming Systems

## WORK HISTORY

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**Metallon Inc.**

(November 2017 - August 2018)

**Mechanical Engineer**

**Thomaston, CT**

- ✧ Increased efficiency of part assembly by integrating EPSON SCARA robot into the manufacturing process.
- ✧ Programmed EPSON SCARA robot to perform part assembly using EPSON RC+ 7.0 software.
- ✧ Programmed a PLC to integrate sensors, actuators, and other mechanical processes with the robot to create a collaborative system.

**Hubbell Incorporated**

(May 2015 - August 2015)

**Summer Intern, GFCI Design Engineering Department**

**Shelton, CT**

- ✧ Improved usability of Ground Fault Receptacle models by re-creating part drawings and 3-D assemblies in order to migrate them from Unigraphics NX to AutoCAD Inventor.
- ✧ Created product control charts and engineering change notices for the Self Test Ground Fault Receptacles.
- ✧ Performed weekly tests on products to ensure UL safety standards were followed.
- ✧ Created 5 minute video to be used as a guide for safely installing the Hubbell Recessed Floor Box.

**The Hudson Union**

(May 2016-Current)

**Video Editor**

**New York, NY**

- ✧ Edited and managed all videos for YouTube page, increasing viewership by 50%.
- ✧ Combined 20 clips to create promotional video highlighting Hudson Union's diverse & distinguished guests.

## PROJECTS

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**Design of a Device to Prevent Infant Heat Stroke Deaths in Automobiles Due to Memory Lapse:**

- ✧ Construct a solution to the problem of children being forgotten in cars.
- ✧ Designed and developed a car seat accessory and iPhone app.

**Prototyping of a Semi-Autonomous Search and Rescue Robot:**

- ✧ Integration manager of a team of 7 in the design and prototyping of a Rescue Robot controlled by an Arduino.
- ✧ Specifications include: pulling itself over a 12" wall using a retractable arm, and using proximity and light sensors to autonomously navigate a chute and find a light source.
- ✧ Developed and tested all navigation controls, sensor integration, and autonomous programs.

**Development of an Unmanned Underwater Vehicle:**

- ✧ Worked in a team of 11 to design and manufacture an underwater unmanned vehicle (UUV) to test applicability towards oil spill detection and ocean exploration.
- ✧ Headed the buoyancy sub-team, tasked with maintaining neutral buoyancy of the vehicle for stability purposes.
- ✧ Machined and assembled parts.

**Proposal for Near Earth Asteroid Intercept Mission:**

- ✧ Worked in a group of 15 to create an in-depth plan for the deflection of a theoretical asteroid on track to catastrophically impact the Earth in 10 years.
- ✧ Assessed viability of different deflection methods including kinetic deflection, nuclear standoff explosions, and sub-surface nuclear explosions.
- ✧ Examined current communication, propulsion, and power systems for use in theoretical mission spacecraft.

## SKILLS

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- ✧ **Programming:** RC+ SPEL, Ladder Logic Programming, Java, Matlab, LaTeX, Arduino, C, Swift, Python
- ✧ **Software:** Microsoft Office Suite, AutoCAD Inventor, PTC Creo, Solidworks, Productivity Suite Software
- ✧ **Hardware:** Machine Shop skills including use of a lathe, mill, and CNC