

LEAH WALLACE

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Citizenship: United States of America • Canada

EDUCATION

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

Metallon Inc.

(November 2017 - Current)

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

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

- ✧ **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