(202) 486 9513 **Zane Carmichael Gavin** gavin.z@husky.neu.edu
86 Saint Stephen Street, Boston, MA 02115 Portfolio: zanecgavin.github.io

Education

Northeastern University, Boston, MA May 2018
Candidate for Bachelor of Science in Mechanical Engineering
GPA: 3.65
Honors: Dean's List, Excellence Scholarship
Courses: Thermodynamics, Mechanics of Materials, Engineering Mechanics and Design, Engineering Problem Solving and Computation, Understanding Design, Calc. III, Diff. Eq. and Linear Algebra

Technical Skills

Computer Applications: Creo, SolidWorks, Inventor, AutoCAD, Visio, Excel
Programming: MATLAB, C++, Python, HTML, CSS
Hands-On: Experienced with lab equipment and procedures as well as hand and power tools
Languages: Spanish – Conversational

Professional Experience

iRobot Corporation, Bedford, MA January – June 2015
Systems Engineering Co-op
- Designed and constructed a modular test bed and CAD-ed (Creo) custom fixtures
- Modeled room designs with Visio, built using 80/20
- Conducted comprehensive testing on robots with in house video tracking software
- Provided regular team briefings on systems testing of a project in the late stages of development
- Upgraded tracking software, for new camera, operating system, and smaller file sizes, using OpenCV Computer Vision library (C++)
- Prepared professional documentation of testing and software procedures

Agricultural Research Service, USDA, Beltsville, MD June - August 2014
Pathways Intern
- Tracked photoluminescence (Raman and NIR) of a variety of wheat specimen
- Processed and analyzed spectra with MATLAB and Eigenvector PLS_Toolbox
- Designed (AutoCAD) laser system to measure density distribution of liquids

Research Experience

Carbon Nanostructures Research Group, Northeastern University August 2014 - Present
Undergraduate Research Assistant
- Conducting and designing tests for carbon nanotube fiber treatment
- CAD-ing and constructing fixtures for tests and peripherals, electrolysis cell and control box, using AutoCAD, Inventor and laser cutter
- Investigating the following prospective projects: nanostructure-quantum dot photosensor, capped carbon nanotubes, encasing (quantum dots encapsulated in a polymer shell)
- Developing and maintaining group webpage with HTML, CSS, and Bootstrap

Background and Interests

- Playing guitar, traveling, hiking, biking and running
- Programming: Automating digital tasks to increase efficiency
- DIY: Building cool stuff and fixing broken things