(202) 486 9513 **Zane C. Gavin** gavin.z@husky.neu.edu
1214 Randolph Street NE, Washington, DC 20017 Portfolio: zanecgavin.github.io

Education

Northeastern University, Boston, MA May 2018
Bachelor / Master of Science: Mechanical Engineering, Material Science
GPA: 3.76, Dean's List, Excellence Scholarship
Capstone Project: designed and fabricated thermal vacuum chamber for CubeSat environmental testing in coordination with NASA JPL

Professional Experience

Tesla, Inc., Palo Alto, CA January – June 2017
Drive Systems Engineering Intern

- Created dashboard for real-time tracking of drive systems testing and compiling
  - Drive unit damage based on accelerated fatigue damage models
  - Reliability of drive units at the system and component level
- Developed and modified fatigue damage models based on dynamometer test logs
- Managed ¼ scale 3D prints of forthcoming drive units for assembly validation
- Supported state-of-the-art bearing damage modeling and research, including experimental test design and execution for dielectric properties of ATF-9

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 rooms using 80/20
- 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

Research Experience

Carbon Nanostructures Research Group, Northeastern University August 2014 – January 2017
Undergraduate Research Assistant

- Conducted and designed tests for carbon nanotube fiber treatment
- Investigated the following prospective projects: nanostructure-quantum dot photosensor, capped carbon nanotubes, encasing (quantum dots encapsulated in a polymer shell)
- Developed and maintained group webpage; https://www.coe.neu.edu/research/onsi/

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

Background and Interests and Skills

Computer Applications: SolidWorks, Creo, Catia, Inventor, Ansys
Programming: MATLAB, C++, Python, PHP, SQL, JavaScript
Professional: Computer programing, automating simple tasks, building cool stuff and fixing broken things
Personal: Playing guitar, traveling, hiking, biking and running