

## Education

NORTHEASTERN UNIVERSITY, BOSTON MA – 2019-PRESENT

- Candidate for Bachelor of Science in Mechanical Engineering
- GPA: 4.0 (Dean's List)
- Courses: Statics, Dynamics, Thermodynamics, Systems Analysis and Controls, Robotics, Material Science, Mechanics of Materials, Diff. EQ

MASSACHUSETTS ACADEMY OF MATHEMATICS AND SCIENCE AT WPI, WORCESTER, MA – 2017-2019

- WPI GPA: 4.0
- Honors: National Honor Society Member
- WPI Courses: Physics I-II, Calculus I-IV, Intro to Electrical Engineering, 3 Literature Classes

## Technical Skills

APPLICATIONS: SolidWorks, MATLAB, Word, Excel, Powerpoint, G-Suite, PrusaSlicer, Arduino IDE, Eclipse IDE (For Java and HTML/CSS). Some experience with Mathematica, Maple, Android Studio, Autodesk AutoCAD, Inventor, HSM Works and Fusion 360, Esprit CAM, Onshape, KiCAD

PROGRAMMING: Java, MATLAB, some experience with C++ and HTML/CSS

MANUFACTURING: FDM 3D printing, Laser Cutting, Soldering. Some experience with CNC mill, Lathe, Water-jet cutter, Pre-preg lay-ups

## Experience

SPARKING TRANSISTORS 3D PRINTING AND DESIGN – SOLE PROPRIETOR | MARLBOROUGH MA – 2019-PRESENT

- Manufactured 3D printed artistic and engineering parts for Treatstock.com and All3DP
- Designed and manufactured low-cost protective casings for LCDs and ultrasonic sensors used for ophthalmology at M&S Technologies

MASSACHUSETTS ACADEMY OF MATH AND SCIENCE SUMMER CAMPS – CAMP COUNCILOR | WORCESTER MA – SUMMER 2019

- Directed interactive engineering activities for middle school students including SolidWorks and 3D printing training

## Projects and Volunteer Work

AEROSPACENU CLUB | NORTHEASTERN UNIVERSITY – 2019-PRESENT

- Designing and testing parachute deployment and reefing mechanisms to achieve safe, controlled descent of a liquid bipropellant rocket
- Instructing new students in the design and manufacturing of launch vehicles and payloads on a weekly basis
- Developed marman clamp and release mechanism for rocket separation and submitted report detailing mathematical techniques used to evaluate the loading of the constituent components
- Designed and implemented an instrumented nose cone assembly with load cell and pitot tubes for drag data acquisition on a test vehicle
- Built a car-mounted parachute testing apparatus and used it to evaluate the performance and drag coefficients of reefed parachutes.
- Constructed a 7' solid motor rocket for testing a payload interface and ejection mechanism and validating parachute reefing systems

FACE SHIELD MANUFACTURING – SPRING 2020

- Organized a group of 10 students to 3D print nearly 1000 face shield frames for use at healthcare facilities across the Northeast
- Collected shield components from students in the Boston area and delivered them to assembly and distribution locations

THE CLUBHOUSE MAKERSPACE - VOLUNTEER MENTOR | ROXBURY MA – 2019

- Worked with Roxbury youth on self-directed artistic, musical, and engineering projects as part of a college mentoring program

RC HOVERCRAFT – 2019

- Developed a small-scale radio control hovercraft using fly-by-wire Arduino-controlled PID angular velocity stabilization

CLIPBOARDS FOR USE WITH ONE HAND – 2018

- Designed and manufactured five clipboards with a low-force clamp mechanism for use at Seven Hills in Worcester, a community center serving people with mobility in only one hand who have difficulty writing and using conventional clipboards

MARLBOROUGH COMMUNITY CUPBOARD – PATRON SERVICE | MARLBOROUGH MA – SUMMER 2017

- Stocked shelves, received deliveries, and served customers at the dry goods pickup counter, adjusting food allotments to satisfy customer preferences while maintaining adequate stock of popular items

## Interests

- Enjoy outdoor activities like hiking and sailing. Eagle Scout
- Black Belt in Kenpo Karate (14 years experience)