

## EDUCATION

Rensselaer Polytechnic Institute, Troy, NY; GPA 3.43/4.00.

2016 – 2019

- Bachelor of Science, Mechanical Engineering.
- Earned degree in 5 semesters.

## SELECTED PROFESSIONAL EXPERIENCE (2.5 years)

Zebra Technologies: *Mechanical Design Engineer*

July 2019 - Present

- Designed CAD models, drawings, and support fixtures for plastic and sheetmetal production parts on an exciting upcoming product. Took ownership of components from concept design to production release, including working through the DFM, DFA, FAI, and testing stages of development.
- Worked closely with industrial design, electrical engineering, software, supply chain, and manufacturing teams to develop components. Interfaced with overseas suppliers and inspection labs.
- Took initiative to develop Monte Carlo simulation in Python to analyze a complex tolerance stackup.
- Created a detailed database of FPC connectors to make it easier for mechanical team to select components.

The Raytheon Company: *Mechanical Engineering Intern*

May – Aug. 2018

- Designed, prototyped, and machined innovative custom components for Top Secret defense contract.
- Created concept devices and performed industry trade studies for specialized technologies.

MagneMotion, a Rockwell Automation Company: *Co-op Mechanical Hardware Engineer*

Jan. – May 2018

- Led international team to develop trade show demonstration of key product line. Completed on-time and on-budget despite time zone differences, a tight schedule, and a rigid deadline.
- Performed R&D on state-of-the-art components for upcoming product line.
- Led CAD development of \$20,000 custom internal testing platform, comprising over 1 ton of machinery.
- Designed mass-produced sales demo system to save the sales team time and decrease shipping costs. Turnkey system received rave reviews from stakeholders.
- Completed Failure Analysis and Corrective Action (FACA) studies directly for customers.

Sandia National Laboratories: *Research and Development Intern*

May – Aug. 2017

- Developed automated data processing program to simplify a 40+ page report into a concise executive summary, saving significant operator time for a \$10,000/day particle accelerator.
- Published well-received paper on the processing program in IEEE Pulsed Power Conference proceedings.

## SKILLS

*Computer-Aided Design (CAD)*

Strong experience in Creo, Solidworks, NX, Inventor, Fusion 360, and OnShape. Experience in modeling complex curvature and performing finite element analyses.

*Drawings*

Strong knowledge of general dimensioning and tolerancing (GD&T) principles. Significant experience quickly and efficiently creating and maintaining documentation for parts.

*Communication*

Won first place prize of \$1,000 for excellence in public speaking at RPI's MANESAC elevator pitch competition, 2019. Received an A in rigorous Speech Communication course at RPI.

*Prototyping*

Experience working with manual machine shop equipment including lathes, mills, drills presses, and saws. Also experienced with laser cutters, waterjets, and 3D printers.

*Programming*

Strong ability with Python, C/C++, and other languages. Experience integrating low level embedded protocols including PWM, I2C, UART, and Serial. Experience with MATLAB and LabView.

*Team Leadership*

Led multidisciplinary teams at 12 hackathons and makeathons, including competitions at MIT, Stanford, Harvard, and the Vatican. Won multiple prizes at MIT and other institutions.

## SELECTED PROJECTS

*Flamethrower* A fully functional custom flamethrower made from sheetmetal, OTS components, and 3D printed parts. RPI, 2019.

*WallPaint* A robot that paints patterns and solid colors on walls. Built at MakeHarvard 2018, continued at MakeMIT 2018.

*Pathways* A distributed mapping system to route cars efficiently in surge traffic conditions. Winner of "Best Use of Location Data", "Best Hack w/Startup Opportunity", and "Moonshot" prizes, worth over \$6,000 in total. HackMIT, 2017.

*Polarigo* A smart belt that helps blind individuals navigate and orient themselves using magnetic North as a reference point. Built in Inventor's Studio I course, 2017.

*HermeSee* An IoT-enabled pair of shoes that helps blind individuals avoid obstacles by vibrating when an object is detected in front of them. Built at MHacks at the University of Michigan, 2017.